NO TP

Occidental Medical Times

VOLUME XVII. SAN FRANCISCO, JANUARY, 1903. NUMBER 1.

DIAGNOSIS OF DISEASES OF THE GALL-BLADDER.

By DR. WM. WATT KERR, Professor of Clinical Medicine University of California.

Read before the San Francisco County Medical Society, December, 1902.

A full discussion of the topic assigned to me is not possible within the prescribed time, and, consequently, an attempt has been made to select only the major features, and to leave what may be called the fine points in diagnosis for elucidation by exploratory incision at the hands of one of our surgeons. The frequent association of diseases of the gall-bladder with other ailments, and the still more frequent association of its various diseases with one another, make it somewhat difficult to establish a differential diagnosis; but probably an approximate idea of the condition of affairs will be attained if in each case of diseased gall-bladder an attempt is made to answer the following questions: (1) Is there a tumor? (2) are gall-stones present? (3) is there any inflammatory process and of what variety?

Half the difficulty in making a diagnosis arises from neglecting to invariably follow a definite line of procedure, and a consequent inability to realize exactly what we should look for when examining a patient; but it is certain that any one who can succeed in obtaining a correct answer to each of those questions will have a very fair knowledge of the condition of his patient's gall-bladder.

1. Is there a tumor? We have selected this as the first question, because it is the one which each investigator propounds to himself, it may be unwittingly, the moment he places his hand in the region of the gall-bladder. With the patient in the dorsal position, and the liver of approximately normal size, tumors of the gall-bladder may be detected as pear-shaped formations, extending from the end of the ninth costal cartilage downwards and slightly forwards towards the umbilicus; on palpation a sulcus can be detected between the liver and the tumor, and upon full inspiration the swelling can be felt to descend. When the patient is placed in the knee-chest position and the investigator's hand applied over the abdomen in the vicinity of the tumor, the enlarged gall-bladder falls against the hand, and the above conditions can be ascertained even better than in the dorsal position. Percussion is not of much service in determining the size of the gall-bladder, as the intestines prevent the production of a reliable note. Occasionally some difficulty is experienced in distinguishing between a dislocated right kidney and enlargement of the gall-bladder, but this is only the case when the patient is so stout, or the liver so enlarged, as to interfere with palpation of the kidney in the normal position and prevent detection of the difference in shape between the two organs; under such circumstances even the X-ray is unsatisfactory, but considerable aid is obtained from inflation of the intestine with gas, so that the kidney is forced back towards its normal site, while the gall-bladder becomes more prominent anteriorly. If the existence of a tumor has been ascertained, the next question is, Are we dealing with (a) new growth?

5332

(b) simple distension of the gall-bladder? New growths in the gall-bladder are comparatively uncommon, and are nearly always due to cancer, which may be primary or secondary. The indications are the presence of a tumor, hard in consistence and slightly tender to the touch, continuous pain in the right hypochondrium and infra-scapular regions with exacerbations at night, and a rapidly-increasing cachexia. As biliary calculi are present in over 90 per cent of the cases, there may be a history of hepatic colic.

Tumors due to distention of the sac are caused by: (a) Accumulation of bile from obstruction of the common duct; (b) accumulation of pus; (c) accumulation of mucus (hydrops or dropsy of the gall-bladder); (d) accumulation of gall-stones. As the first three are all due to the presence of fluid, there are certain signs common to all of them; these are the presence of a tumor which is soft, elastic, and fluctuating. The distinctive feature of each will be best considered separately.

(a) Distention from bile. As already stated, this can only be due to obstruction of the common duct, for while closure of the cystic duct would cause retention of bile already in the sac, it would equally prevent the entrance of additional bile, and thus render dilation impossible. Furthermore, unless the common duct is closed the bile escapes into the intestine; consequently in most cases a history of some cause for the obstruction can be obtained, such as duodenal catarrh, hepatic colic, perihepatitis, or it may be there are evidences of a tumor pressing on the duct, such as enlarged gland, gumma, or cancer, especially cancer of the head of the pancreas. The tumor is slightly tender on pressure, and the liver is enlarged and sensitive; there is jaundice, which becomes well marked, and bile is absent from the stools. In obstructive jaundice bile may be distinguished in the blood before it is detected in the urine or conjunctiva, and it appears to cause changes in the serum, which are said to be best marked when obstruction is produced by gall-stones. Under such conditions coagulation is delayed, and fatal hemorrhage which has happened during operations for gall-stones has been attributed to this cause. When, however, we remember the large number of patients suffering from gall-stones who have been operated upon for other lesions without exhibiting any tendency to hemorrhage, it would seem more just to attribute the excessive bleeding to the diseased condition of the gall-bladder rather than to any change in the blood.

(b) Distention from accumulation of pus is nearly always due to obstruction of the cystic duct, and is distinguished from bile accumulation by greater pain and tenderness over the sac, by the presence of rigors, pyrexia, sweats, and leucocytosis, and by the absence of enlargement or tenderness of the liver.

(c) Accumulation of mucus (hydrops cystidis felleae). This also is due to obstruction of the cystic duct, and, although fresh bile can not enter the sac, nevertheless hyperemia, from pressure on the veins at the neck of the gall-bladder, results in an exudation of a thin mucoid substance, which dilates the sac, sometimes to such an extent as to make it occupy nearly the entire abdominal cavity. It is distinguished from suppuration by the absence of leucocytosis, hectic fever, although there may be some pyrexia, by the larger size of the tumor and the slight degree of tenderness. From bile dilatation we distinguish it by the absence of jaundice, the presence of bile in the motions, and by the absence of marked hepatic tenderness or enlargement.

(d) Enlargement from accumulation of gall-stones. This only happens when the calculi are considerable in size or large in number. The tumor is hard, nodular, with little pain or tenderness, unless there be an associated local peritonitis. There may be occasional attacks of jaundice and history of biliary colic. Crepitus may be obtained when the abdominal walls are thin and relaxed.

Question 2.—Are gall-stones present? With a history of hepatic colic, the answer to this question is easy, but it frequently happens that gall-stones do not disturb the patient in any way, and at other times they only produce chronic dyspepsia. Calculi may complicate any disease of the gall-bladder, and the sac may be enlarged, normal in size, or diminished. Under the head of tumors of the gall-bladder the enlargements have just been discussed, and all we have to remember at present is that gall-stones may produce enlargement by (a) accumulation or large size of calculi; (b) biliary distention by obstructing the common duct; (c) hydrops cystidis felleae and purulent distention by obstructing the cystic duct. When the gall-bladder is not dilated, the diagnosis is even more difficult, although in either condition the only pathognomonic symptom of gall-stones is an attack of the hepatic colic.

The possibility of the existence of gall-stones in a patient who presents no history of colic may be overlooked, on account of the presence of paroxysms which are almost identical with those of ague. For several months I have had charge of an elderly lady who presents all the gastric symptoms and tender areas diagnostic of calculi, but in addition to these she has fever of the tertian type, when the temperature generally rises as high as 104° Fahr., and sometimes to 106° Fahr. Under treatment directed to her liver, the attacks have been diminished in frequency and severity, but quinin and other malarial remedies are absolutely inert. Plasmodia never have been found, and leucocytosis is absent. A male patient presents similar symptoms, only in his case there is a distended gall-bladder and a persistent leucocytosis. Unfortunately, neither patient will submit to an exploratory incision, and the diagnosis remains unconfirmed.

If a patient complains of chronic gastric disturbance, exhibits tenderness on pressure over the head of the gall-bladder, also over the ninth costal cartilage, and posteriorly about two and a half inches to the right of the tenth dorsal vertebra, in all probability he is suffering from diseased gall-bladder, and calculi are found in a large proportion of these cases. Under such circumstances the gall-bladder may be normal in size or even contracted. It would seem that the continuous irritation from the presence of gall-stones tends to produce thickening and contraction of the sac, but if obstruction of the duct takes place prior to the changes in the walls, then the bladder will dilate. A short time ago I was present at the autopsy of a patient who at one time had suffered from biliary colic, but had been free from attacks during the last thirty-six years. Throughout the last fourteen years of his life he was a dyspeptic, and complained of some tenderness on pressure over the gall-bladder. At the examination the gall-bladder was found to be two inches long, five-eighths inch wide, the walls thickened and its cavity packed with calculi.

There was not any obstruction of the duct in this case, but the condition of the gall-bladder explains Courvoisier's law: "When the common duct is obstructed by a stone, dilatation of the gall-bladder is rare; when the common duct is obstructed by other causes, dilatation of the gall-bladder is common." Fenger attributes the absence of dilation to a ball-valve action of the calculus in the common duct, so that much of the bile escapes; but I can not help feeling that the usual cause lies in the preexisting disease of the gall-bladder, which resulted in the formation of the calculi and thickening of the bladder walls. This is by no means an uncommon condition, and I believe that most pathologists admit that it is almost a daily occurrence to find gall-stones in cases where their presence was never suspected during life. I have referred to this because there is a discrepancy between it and the prevalent idea that long-existing gall-stones are productive of carcinoma, and the contradiction suggests that our inferences regarding the relation between calculi and cancer of the gall-bladder require modification. The frequency with which calculi are found in cancerous gall-bladders,—Siegert found them in 95 per cent of primary cancer of the gall-bladder and 15 per cent of secondary cases,—led to the idea that malignancy is almost invariably secondary to the gall-stones; but, in all probability, cancer is the cause of the gall-stones in many instances. The evidences of this are (a) that, whereas primary cancer of the gall-bladder is a comparatively rare disease, gall-stones are very common, being present in more than 10 per cent of all bodies examined; Schroder, of Strasburg, found them in 12 per cent of all his autopsies, and other pathologists report even a higher percentage. Now, if gall-stones result in cancer of the gall-bladder as often as generally claimed, it is rather difficult to understand how the cause should be so common and the effect so comparatively rare. (b) The above-quoted statistics of Siegert, showing that gall-stones are present in 95 per cent of the cases of primary cancer of the gall-bladder, would indicate that, while gall-stones are very commonly found without associated malignancy, malignancy is rarely found without gall-stones. Such observations can not fail to suggest the probability that cancer facilitates the formation of calculi. The fact that gall-stones are present in only 15 per cent of the cases of secondary cancer is easily understood, because the patient with cancer limited to the gall-bladder will, as a rule, live much longer than he whose disease originated in more important organs, and, consequently, there will be a greater time in which gall-stones may form. (c) Naunyn's investigations proved conclusively that gall-stones are not the result of any defective chemistry in the liver, but that they are secondary to changes in the epithelial lining of the gall-bladder, and, as cancer of the gall-bladder most frequently begins upon the mucous membrane, and then extends through the whole thickness of its wall, we have exactly the condition that would favor the formation of calculi.

An appreciation of this relationship between cholelithiasis and disease of the gall-bladder is of the greatest importance in regard to treatment, as it emphasizes the advisability of surgical interference in all obstinate cases of cholecystitis and the necessity for maintaining a biliary fistula until the inflammation has subsided. Furthermore, it explains the frequency with which we meet calculi in all diseases of the gall-bladder, and raises the question whether many of the symptoms and signs which we at present attribute to gall-stones are not really due to coexisting disease of the viscus itself. Observations made by Dr. Keay, published in the "British Medical Journal," April 14, 1900, suggest some points in the character of the pain that may aid in establishing a diagnosis between cholelithiasis and cholecystitis. The writer was himself a sufferer from gall-stones, and has recorded the results of his personal experience, as well as that which he collected from a large number of fellow-sufferers whose statements could be relied upon. He found that the pain of gall-stones commenced in the back, near the tenth dorsal vertebra, and may frequently be mistaken for lumbago or spinal disease; that during the attack of colic the pain extended round to the front, and was most intense in the right and occasionally in the left hypochondrium. The pain that begins in front is due to local peritonitis or distention of the gall-bladder.

The following epitome of the history of a patient who was admitted to my ward in June of the present year well illustrates the gastric symptoms which may coexist with cholelithiasis. The patient was sixty-seven years of age, and came to the hospital complaining of increasing weakness and dyspnea on exertion, which were believed to be due to ordinary senile myocardial changes. There was not any gastric distress, but a hard tumor could be felt in the upper right abdominal quadrant, extending from the eighth rib at the costal margin, within the mammary line, as low down as half an inch above the umbilicus, while the left border extended downwards from the costal angle. It was slightly tender on pressure, and moved on inspiration. This, with the increasing weakness, suggested the diagnosis of cancer of the pylorus and upper portion of the duodenum. A test breakfast, examined upon June 9, showed free hydrochloric acid absent, lactic acid present in considerable quantity, pepsin absent, chimogen markedly diminished, Boas-Oppler bacilli present, but no mucus, blood, pus, nor tissue fragments. The stools were normal. There was a leucocytosis of 14,600, and repeated blood examinations only showed an occasional digestive leucocytosis, which was always very slight.

Under treatment by lavage, together with the use of nux vomica and hydrochloric acid with meals, the Boas-Oppler bacillus and lactic acid disappeared, while free hydrochloric acid reappeared in small amount in the stomach, the administration of acid being discontinued for twenty-four hours and the stomach washed immediately before the test breakfast was given. As the patient's general condition did not improve he was referred to Dr. Huntington for operation. With the exception of a slight dilation, such as is common in many old people, the stomach and duodenum were normal, but the gall-bladder contained nine calculi, one of which weighed 180 grains, and occluded the cystic duct.

Question 3.—Is the process inflammatory, and what is the character of the inflammation? Inflammation of the gall-bladder, or cholecystitis, varies in its symptoms, according to the intensity of the process and the presence or absence of complications. The disease may be either acute or chronic. In the very mild variety there is simply gastric disturbance, jaundice is absent or but very slightly marked, there is no actual pain over the gall-bladder, but possibly a feeling of uneasiness in its vicinity, and some slight degree of tenderness on pressure. There is, however, a more acute variety, in which the pain is severe and constant, with paroxysmal exacerbations, tenderness most intense over the site of the gall-bladder, but frequently extending to the epigastrium, and even down to the umbilicus. The constitutional symptoms are generally well-marked, consisting in obstinate vomiting, constipation, and extreme prostration. It is not always possible to say whether the inflammation is of a suppurative, phlegmonous, or gangrenous character, although the onset of any of these conditions is generally marked by rigor, sweats, and fever, followed or accompanied by well-marked peritonitis; nevertheless, as in the case which we are about to mention, peritonitis may be present when the disease is non-suppurative, and, on the other hand, the constitutional symptoms are occasionally so mild when these conditions do exist as to deceive regarding the exact nature of the case.

Through the courtesy of Dr. J. A. Simpson, I can report the history of a case that I saw with him during last month. The patient was a woman twenty-eight years of age, who, about twelve days before my visit, had called upon Dr. Simpson on account of severe pain in the right upper abdominal quadrant and extending down to the umbilicus. The pain was severe, with exacerbations; there was slight tinging of the conjunctivae, but no general jaundice; and an abundance of bile was always present in the stools. The temperature was rarely more than half a degree above normal. As the abdominal muscles were very tense, he put her under chloroform, and thoroughly explored the abdomen without finding any evidence of a tumor. When I saw her subsequently, the symptoms were just as have been described by Dr. Simpson, the pain being most intense around the umbilicus; but maximum tenderness was over the gall-bladder. There was persistent vomiting, with extreme prostration, and a slight tendency towards delirium. Two conditions suggested themselves: (a) Disease of the head of the pancreas; (b) cholecystitis, with partial obstruction of the common duct. After discussion, cholecystitis was regarded as the probable cause, and the family was advised to permit surgical measures, if improvement did not take place within a week. After three days the persistent vomiting put medicinal treatment out of the question, and the abdomen was opened by Dr. Boyd, who reported that he found the stomach, pancreas, and all organs, except the gall-bladder, to be perfectly healthy. The gall-bladder projected beyond the liver for about half an inch, was attached to the colon by what appeared to be a mesentery and to liver by congenital or very old adhesions, the ducts were open, gall-stones were absent, but the bile was dark in color and thick in consistence, the bladder wall was thickened and its mucous membrane so soft and hyperemic that it bled upon the slightest touch. Evidently the case was in an early stage of phlegmonous cholecystitis.

The following case illustrates how closely the symptoms of cholelithiasis, cholecystitis, and malignancy may resemble one another:—

A man age 63 was admitted to one of my wards on April 28 of this year. Examination of his chest revealed signs of a quiescent tubercular process in both lungs, but he complained of loss of weight, weakness, and a continuous dull pain in his back, under the right scapula. A tumor could be felt above and to the right of the umbilicus, tender on pressure, and causing an attack of coughing whenever it was palpated. There was no jaundice. Repeated examinations of gastric contents showed absence of free hydrochloric acid, with presence of lactic acid and Boas-Oppler bacilli. Hourly examinations of the blood showed absence of digestive leucocytosis. A diagnosis of carcinoma was made, and the case was referred to Dr. Huntington for operation, who found a distended and thickened gall-bladder, with old and recent adhesions binding it to the anterior wall of the stomach, and causing kinking, with partial obstruction of the cystic duct. The adhesions were divided and the gall-bladder drained, but, unfortunately, the pulmonary disease was awakened, and six weeks later the patient died from tuberculosis.

The recognition of this similarity in the symptoms presented by different diseases of the gall-bladder is important, because they are only too frequently ascribed to cholelithiasis alone, and an exploratory incision which enables the investigator to palpate the gall-bladder and demonstrate the absence of calculi is sometimes regarded as proof that the sac is in a healthy condition. The abdomen should never be closed until the surgeon is satisfied that even a moderate degree of cholecystitis is absent. These remarks on diagnosis would be incomplete without reference to the areas of reflected pain and cutaneous tenderness which are associated with disease of the liver and gall-bladder. The fact that visceral diseases are frequently associated with pain in remote parts of the body has been known to clinicians for many years, but it is only a short time since neurologists furnished us with the explanation. Disease of the liver is frequently accompanied by pain in the right shoulder, on account of the phrenic sending a branch to the subclavius muscle, while further down it is distributed upon the abdominal surface of the diaphragm, and sends branches to the hepatic plexus. Similarly cutaneous tenderness is obtained over some portion of the area supplied by branches of the same nerve that supplies the diseased organ. The eighth and ninth spinal segments on both sides and the tenth segment on the right side send nerves to the gall-bladder and liver, and their cutaneous distribution extends from about the level of the ninth dorsal vertebral spine to below the first lumbar, passing almost horizontally round the body, so that the ninth reaches the level of the umbilicus. This bilateral supply from the eighth and ninth spinal segments accounts for the extension of pain to the left hypochondrium in hepatic colic and other diseases of the liver. Under similar circumstances we may find tender nodes or "maximums" posteriorly, at about two and a half or three inches to the right of the tenth dorsal spine, and also anteriorly over the ninth right costal cartilage. Careful examination will generally elicit the presence of these painful nodes when the liver or gall-bladder is diseased, but their absence does not indicate that the organ is healthy. Furthermore, they appear to be equally well marked whether it be the liver or gall-bladder that is affected, and hence are not of any value in differentiating the one from the other.

ACUTE PHLEGMONOUS CHOLECYSTITIS.

By L. W. ALLEN, Resident Physician St.
Luke's Hospital, Former House Surgeon Mt. Sinai Hospital, New
York.

DRAINAGE—SEPTIC ABSORPTION—DEATH.

Of the various types of cholecystitis, the acute phlegmonous form is rather rare. The exhaustive statistics of

Courvoisier[1] on diseases of the gall-bladder and bile-ducts, 1890, give only seven cases. Since this time I have been able to find twenty-one more, though there are undoubtedly many others which have been classed under the general heading of acute cholecystitis. Lane[2] published one case in 1893, Marmaduke Shield[3] one in 1895; besides these, A. W. Mayo Robson[4] cites three of his own in his recent publication; Murphy,[5] one in 1897; Maurice H. Richardson[6] in 1898 publishes six, two of which were gangrenous, and four others probably phlegmonous, and in 1900 one other; Kakels,[8] one in 1899; Mt. Sinai Hospital Reports of 1899, one; Mayo[9] in 1900 mentions three, for which he performed complete excision of the gall-bladder; Francis D. Donoghue,[10] one in 1902; C. W. Strobell,[11] one in 1902; Thos. W. Huntington, of this city, one, as yet unpublished. The resumes of Oschner,[12] of forty-eight cases, and of Mayo,[12] of 328 operations on the gall-bladder and bile-passages, give none, but some of their cases of acute cholecystitis were undoubtedly of the phlegmonous form. Hans Kehr,[13] of Halberstadt, who has the largest number of published cases, does not mention this form particularly, although his pamphlet is not devoted to a close statistical classification. Therefore the following case finds justification for presentation, especially in that it contains several points of interest to the diagnostician and to the surgeon.

The close association between appendicitis and cholecystitis has been repeatedly illustrated, both as to the diseases existing concomitantly and as to the symptoms of the one being mistaken for those of the other. The latter condition was present in the case about to be reported. There is an increasing conviction among surgeons that the gall-bladder should receive the same surgical treatment as the appendix when diseased, that of complete removal. Although the analogy between the two differs in many respects, both in health and in disease, yet in the acute fulminating forms of both an early and complete removal of the offending organ is beginning to be regarded by surgeons as giving the most satisfactory results. I believe that if we had performed a cholecystectomy in the present case, thus eliminating the source of septic absorption from the bladder's phlegmonous walls, there would have been a better chance of saving him.

The patient, C. R. R., male, age 37, sent to St. Luke's Hospital Jan. 1, 1902, by Dr. Clark J. Burnham, gave the following history:—

Family History.—Negative.

Previous History.—Good health until five years ago, when an umbilical hernia developed, which, however, gave him no trouble until three months ago. At this time he says that it was the seat of similar pains to those he now has. During the intervening months at irregular intervals he has been subject to severe abdominal pains, radiating from the umbilicus to the back, shoulders, and neck. Usually, however, these were confined entirely to the abdomen, and especially to the right iliac region. These attacks have never been of long duration, and, though quite severe while they lasted, have never kept him from attending to his business. No jaundice has ever been present, nor has he ever had clay-colored stools. No history of fever, chills, or sweats. Patient has for some time suffered from a disordered stomach, which condition was always aggravated during these attacks. One week ago patient was seized with severe colicky pains about the umbilicus, which, after a few hours, localized in the right iliac region. These continued for twenty-four hours, and then subsided, allowing the patient to return to his office. Yesterday he had another attack, but at this time, although he had the most severe pain in the right iliac region, it also radiated to the shoulders and neck. He then consulted Dr. Burnham for the first time, calling at the doctor's office, when he was found to be in a state of semi-collapse, pulse rapid and feeble, skin cold and clammy, temperature 101.4 degrees Fahr. When seen this morning the symptoms of serious trouble were more marked. He was immediately sent to the hospital, where I first saw him. On admission, pulse, 110; respiration, 24; temperature, 99.4. Bowels constipated; urine acid, 1,030, no sugar or bile, some albumen, round cells, bacteria, no casts; leucocytosis, 23,420.

Physical examination showed him to be a man of about 200 pounds weight, well preserved, rather obese, expression anxious, skin not jaundiced, sclera normal. Heart normal. Few moist rales over both lungs, slight cough, breathing chiefly thoracic. Abdomen slightly distended, umbilical hernia, two and one-half inches in diameter, irreducible, soft, not tender, dull tympany over it. Diagnosis: Omental hernia, not incarcerated or strangulated, and therefore not concerned in the trouble. Tympanites extending to free border of ribs. Liver dulness normal; no dulness extending downward from tenth rib on right side. Spleen apparently not enlarged. Both recti muscles tense, the right more rigid than the left. Great tenderness over the right side of the abdomen, more marked over the right iliac region and within two-thirds of the area of a three-inch circle below the tenth rib, but most marked over McBurney's point. He also complained of the most pain in the right iliac region. His appearance was that of a patient acutely septic, pulse rapid, face flushed and anxious, willing to talk, the whole being a picture of an acute gangrenous appendicitis, where we often get an intense lymphangitis in the upper right abdominal quadrant. Yet, as the patient had a history of pain in the shoulders and neck, and as the gastric disturbances were not as acute either in this or the previous attacks, as accompanies appendicitis, the diagnosis was held to be either appendicitis or gall-bladder trouble, with preference for the former. Shortly after admission the patient was operated upon, the incision being made for appendicitis over the outer border of the rectus (Battle-Kammerer-Jalaguier method). Appendix found, six and one-half inches long, vessels engorged, but otherwise normal. Appendectomy. Palpation through the wound detected a very tense gall-bladder. Incision enlarged upward to the costal margin. On retracting the costal border upward, to get a better view of the gall-bladder, which, though distended and tense, was not much enlarged, and only just came to the border of the ribs, a few drops of pus escaped from between the liver and gall-bladder. A small piece of gauze was temporarily inserted at this point, while the lower portion of the incision was closed with sutures and the gall-bladder well walled off from the general cavity. A trocar was inserted into the bladder, and about six ounces of very foul-smelling, reddish pus was withdrawn. The gall-bladder was then irrigated with a ten per cent solution of formalin. Traction sutures were then passed on each side of the trocar before withdrawing it. The opening was then enlarged, and stones were sounded for with a long blunt probe, but none found. Two rubber drainage tubes were inserted, and the gall-bladder again freely irrigated. The packing between the gall-bladder and liver was then removed, but no further pus escaped. A longer gauze drain was then inserted. After replacing the deep abdominal gauze with more superficial packings, the wound was dressed, and the patient sent back to bed. Cultures of fluid from gall-bladder showed bacilli coli communis and staphylococci.

Progress Following the Operation.—First Day: Pulse dropped from 110 to 86. Temperature dropped from 99.4 to 98.4, then rose again to 99.2. Leucocytosis dropped from 23,420 to 18,950. He obtained some sleep, and after fifteen hours took and retained liquid nourishment. Codein was administered for a distressing cough. General condition improved. Second Day: Pulse rose to 110; temperature to 100.8. Superficial dressings changed. Moderate discharge from tubes. Wet dressings applied. Series of calomel and salts given with a good result. Leucocytosis, A. M., 19,200; P. M., 23,100. The third day found the patient much improved. A. M., pulse 96, temperature 99, leucocytosis 20,238; P. M., pulse 88, temperature 98.2, leucocytosis 19,940. Patient not so restless, and slept considerably. Bladder irrigated with formalin twice daily, very little discharge, no bile. Fourth Day: Pulse 84 to 94, temperature 97.4 to 98.4, leucocytosis 21,620 to 26,300. Although the temperature and pulse were more favorable, the number of white blood-cells was increased, and the patient did not seem so well. Looked somewhat septic, sclera of a yellowish tinge. Hiccoughed at intervals, which was relieved by stomach lavage and giving nourishment by rectum. Fifth Day: Pulse 80 to 90, temperature 97 to 98.2, leucocytosis 28,000. Hiccoughs returned, and at times very distressing. General condition unimproved. Considerable gas passed from stomach and rectum. No vomiting. Sixth Day: Pulse 86 to 96, temperature 98.4 to 99.4, leucocytosis 31,340, A. M., 31,200, P. M. Hiccoughs continued. Patient for the first time spit up some dark brown fluid, and later vomited blood. Had a large liquid movement, dark brown, resembling tar. Bile for the first time came through the wound. Although these symptoms seemed to point toward a more serious state of affairs, the patient obtained more sleep than he had for two days previous. Consultation was called, but resulted in a decision that further interference was not justifiable, because of the patient's condition. The fact that the pulse as well as temperature was low, although the leucocytosis was high, gave no definite indication for further surgical procedures. The vomiting of blood led to a suspicion that a stone might be making its way into the stomach or duodenum. During the morning of the seventh day the patient seemed much better. He had slept soundly and well, perhaps too soundly, but he did not vomit. His leucocytosis had dropped to 26,500. Pulse 90, temperature 98.2. In the afternoon his pulse was 86, temperature 98.4, and leucocytosis 30,000. Vomiting of blood, some dark and some freshly clotted, recommenced. He retained his nutritive enemata, and his bowels moved once. His general condition was worse. On the eighth day his pulse rose from 96 to 112, until he became pulseless at the wrist six hours before death. The temperature remained at 98.4, dropping to 97.6 before death, while the leucocytosis dropped to 20,000 in the morning and 19,220 in the evening. He was seen by consultants in the morning, and the vomiting of bright blood, with the passage of tarry stools, led more firmly than before to the belief in the perforation of a stone through the walls of the first portion of the duodenum. He sank rapidly, and died on the evening of the eighth day after operation.

Autopsy.—A post-mortem of the abdomen only was obtained. No indications of peritonitis about either the appendix or gall-bladder. The turned-in base of the appendix was difficult to find, and was covered with lymph, making a smooth surface, continuous with the peritoneal coat of the cecum. The blood-vessels of the walls of the stomach and duodenum were found deeply engorged, but no ulcerations were present. The gall-bladder was easily dissected from the under surface of the liver. Along this area there were several perforations in its wall, and a layer of thick creamy pus extended to the junction of the left lobe, and from thence extending down on the left lobe for one and one-half inches, perhaps a dram, in all, well walled off by an attachment of the lesser omentum. This was not like an abscess, but simply spread out in a flat layer. It had no connection with the general cavity, but was an extension in continuity from the perforated gall-bladder along its attachment to the right lobe of the liver. From this, pus cultures of the bacillus coli communis and staphylococci albi were obtained. The cystic and common ducts did not appear thickened or inflamed. Within the gall-bladder a small stone the size of a pea was found. This had apparently blocked the cystic duct until the sixth day after operation, when it had fallen back into the bladder, and allowed the bile to appear at the wound. The mucous membrane of the gall-bladder was perforated in at least thirty places by ulcers varying in size from an eighth to a half an inch. Beneath the mucous membrane the walls were in a phlegmonous condition, extending from one ulcer to another over the greater portion of the gall-bladder. The peritoneal coat was intact everywhere, and only where it was absent along the attachment to the liver was pus found outside the gall-bladder. There were no metastatic abscesses in the liver, nor was there any evidence of an infective cholangitis. Cultures from the liver were sterile.

In considering this case the question arises, Which should be the operation of choice, cholecystotomy, with drainage, or cholecystectomy? Reviewing the various opinions of operators concerning this form of cholecystitis, Kehr, in his tabulation of the diseased conditions of the gall-bladder and bile-passages with the treatment indicated for each class, gives no place to the phlegmonous form. One is led to put it under his heading of acute cholecystitis of severe type. For this class he recommends drainage. But it is quoted that in his later operations he does cholecystectomy, unless drainage is indicated. J. B. Murphy[5] states that "no effort should be made to remove a gangrenous gall-bladder nor to explore its cavity." A. W. Mayo Robson, under the head of the acute phlegmonous form, says: "As soon as the diagnosis of phlegmonous cholecystitis can be established, and it is found that the patient is getting worse rather than better, an exploratory incision should be made, the gall-bladder incised and drained, the cause, if any obvious cause be found, being then removed. If, however, gangrene be discovered, the gall-bladder should be removed." The question I wish to bring before the society tonight is whether such a gall-bladder should be removed even when gangrene can not be demonstrated. Whether or not all these fulminating cases with the intense lymphangitis showing a severe toxemia should be treated by cholecystectomy.

C. L. Gibson,[16] of New York, a strong advocate of the radical operation, merely says of this particular form of cholecystitis: "In phlegmonous, ulcerative, or gangrenous conditions it is the only satisfactory way," at the same time limiting his advice to those conditions in which "the anatomical and pathological conditions allow of its easy and speedy performance; that is, if it does not materially add to the technical difficulties and dangers of the operation." Observe that not only the operation of choice is debatable ground, but the differential diagnosis between a simple empyema of the gall-bladder and an acute phlegmonous or gangrenous cholecystitis is practically untouched. How can we decide that we have to deal with a phlegmonous condition and not merely with a severe empyema? An empyema is readily relieved by drainage. Though the question of permanent cure may here arise, it is not the object of this paper to call into discussion the operation of choice in the subacute and chronic diseases of the gall-bladder and biliary ducts. If only empyema is present, drainage will save the patient's life. How can we differentiate between empyema and the more severe conditions of phlegmon and gangrene before the case comes to autopsy? It is usually impossible to see the sloughing walls through the drainage incision, and only in the worst cases can a gangrene be demonstrated ocularly. What help can be derived from the subjective and objective symptoms? The comprehensive and instructive article of Maurice H. Richardson[6] on this type of cholecystitis coincides closely with my own observations. It has been my experience that these patients develop the beginning state of septicemia within the first twelve hours, often within four or six hours. This condition is the best guide to differentiate an empyema from a phlegmon of either the appendix or gall-bladder. The patient seems brighter than usual, often talks rapidly and considerably in the early stages. The face has an anxious expression, perhaps flushed. The pulse is small and rapid, 110 to 130; the temperature is not typical, may be high, or may be normal. Leucocytosis is high, considering the time since onset. Locally, I would lay great stress on the intense lymphangitis found in these cases, causing extreme tenderness, not only over the gall-bladder, but down as far as McBurney's point, or to the iliac crest, and around to the right lumbar region. Often red lines, reaching to the costal margin, mark the lymphangitic progression. The skin is sensitive to the lightest touch, even more so than when peritonitis only is present. In the most severe type, a bluish red congestion of the skin is seen. Often this local disturbance will be the chief guide to a correct diagnosis of acute phlegmon or gangrene of either the appendix or gall-bladder. When found, it is a sign of an extremely alarming condition, necessitating immediate surgical interference, with a bad prognosis, unless relief comes within the first ten to thirty hours, according to the virulence of the infection. In both appendix and gall-bladder phlegmon, the upper two-thirds of the abdominal wall is often about equally affected, making it difficult to locate the organ which is the seat of the trouble, even though one may know that he has gangrene to combat. This difficulty is admirably illustrated in the present case. The patient was not only most sensitive at McBurney's point, but complained of the most intense pain at that point. It is often impossible to decide, but fortunately this is not necessary, as early surgical interference is demanded for both.

Having decided that we have, in all probability, a phlegmonous condition to deal with, is cholecystectomy the operation of choice? This is now debatable ground. Drainage has been the choice in the past. The present tendency is toward the more radical procedure. Of the twenty-eight cases I have been able to collect from the literature at my disposal, sixteen were drained, of which six died and ten recovered. Of these ten, four were not distinctly stated as phlegmonous or gangrenous, but were given the benefit of the doubt, as they were acute cholecystitis of a very severe type. (There were others reported under acute cholecystitis which were plainly empyematous.) Including the present case, it would make a mortality of 41.1 per cent. I was unable to find the method and result in the seven of Courvoisier's statistics. There are four cases of cholecystectomy, one by Francis D. Donoghue, with recovery, and three mentioned by Mayo,[9] result not given. The number of excisions is not as yet large enough to make a just comparison. The result depends also on so many things besides the method of operation,—the time after onset, the virulence of the infection, the vitality of the patient, the number and seriousness of complications,—that it must needs take many more observations to come to a correct conclusion. This patient died of septic absorption from the phlegmonous gall-bladder walls. Is the risk of an increased shock and of peritonitis from complete removal as great as the danger of septicemia from the sloughing walls when only drainage is performed?—I believe not. Experience in similar cases only can tell. The cases reported are still but few, and they run such a rapid course, that many times operative interference comes too late to accomplish anything, or to give a true value to the operative procedure. This case illustrates the extreme danger of leaving behind the phlegmonous walls, whose septic products can not be successfully removed by drainage and irrigation.

In the technic of this type of cholecystitis I would make one suggestion. The gall-bladder having been exposed and walled off in the usual manner, pass a purse-string suture of medium size silk in a circle of one-half inch diameter at its fundus, after palpating the cystic and common ducts. Then in the center of this circle enter a trochar, with rubber tubing attached, into the bladder, at the same time drawing the purse string tight, tying a single knot. After the purulent contents have been withdrawn, the bladder can be washed out thoroughly with some antiseptic solution, and, if thought advisable for easier resection, it can be left full of the solution during the removal. The purse string is drawn tight on removing the trochar. This will substitute antiseptic for septic bladder contents, which will materially lessen the danger during resection, especially if the phlegmon or gangrene has extended through the mucous and muscular layers, a condition, which, if about the neck of the bladder, can not be determined until after the organ is removed.

In conclusion I would draw attention to the unusual course of the pulse, and the absolutely typical rise and fall of the leucocytosis. Temperatures are often around normal in septic conditions, but pulse rates generally run above 100. That the patient died of sepsis there can be no doubt, but the pulse rate ran from 84 to 94 after the second day until the day of death. The leucocytosis, on the other hand, is quite typical. Beginning with 23,420,—fairly high for thirty-six hours after onset,—it dropped to 18,950 after operation, only to rise to 23,100 again within twenty-four hours. On the following day, after irrigation of the gall-bladder and thoroughly moving the bowels, it dropped again to 19,940, only to rise on the fourth day to 26,300, on the fifth day to 28,000, on the sixth day to 31,340. On the seventh day the leucocyte count began to fall, the eighth day finding it at 19,220, indicating a decline in his powers of resistance, rather than an improvement in the patient's condition.

REFERENCES.

1. Courvoisier, Casuistisch, Stat. Beitræge Z. Path. u. Chir d. Gallenwege.

2. Lane, Acute Inflammation of the Gall-bladder, "Lancet," 1893, I, 411.

3. Marmaduke Shields, "Lancet," March 2, 1895.

4. A. W. Mayo Robson, Diseases of the Gall-bladder and Bile Ducts, 1902.

5. J. B. Murphy, Diseases of the Gall-bladder, "Twentieth Century Practice," 1897, Vol. IX, p. 731

6. Maurice H. Richardson, Inflammation of the Gall-bladder, "American Journal Medical Science," 1898, CXV.

7. Maurice H. Richardson, "Journal American Medical Association,' December 1, 1900.

8. Moses S. Kakels, Acute Infective Cholecystitis, "Medical Record," New York, 1899, LV.

9. "Journal American Medical Association," December 1, 1900

10. Frances D. Donoghue, "American Journal Medical Science," February, 19[illegible]2.

11. C. W. Strohell, "Medical Record," April 19, 1902.

12. "Annals of Surgery," June, 1902.

13. Hans Kehr, Anleitung zur Erlernung der Diagnostik der einzelnen Formen der Gallen Krankheit, 1899.

14 Hans Kehr, Chir. Behandlung d Gallensteinkrankheit, 1896.

15 Joseph A. Blake, "Medical News," Vol. 8[illegible], p. 88[illegible].

16 C. L. Gibson, "Medical Record," June 9, 1900.

IMPROVED TREATMENT OF CHRONIC FOLLICULAR URETHRITIS.

By George L. Eaton, M. D.

Chronic urethritis of the male is probably one of the most obstinate diseases with which the physician has to deal. With it the embryo doctor begins his pathological research and through his professional career that little gonococcus of Neisser causes him many wakeful hours professionally, owing to the fact that he feels that his skill has been baffled and to the query he receives from his patient in these few words, "Doc., why don't you stop the running?" In part, no doubt, the patient is to blame for many indiscretions, but I venture to say that the physician is the one on whose shoulders the blame should rest in many cases; for there is no department of general medicine in which such unscientific and routine treatment is adopted as in the case of gonorrhea. Fortified by Valentine's irrigator, a bottle of permanganate of potassium tablets, a collection of a few standard injection formulas to fall back upon in case the irrigation should fail, yet the case continues as of old, now and then seeking new medical aid with the hope of gaining permanent relief. Who is at fault? Is it the patient or physician? It can not be entirely the fault of the patient; is it not the physician's technique?

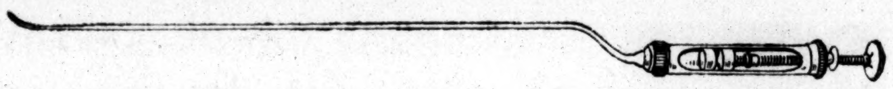
It is only within the past few years that we are able to clearly define the different pathological changes in the urogenital track caused by gonorrhea, such as localized ulcers, folliculitis, and the different stages of infiltration. More accuracy in diagnosis enables us to select the treatment that the special condition is most amenable to, and to all of this we are highly indebted to Nitze, Oberlander, Otis, Chittwood, Valentine, and Koch, who have been instrumental in perfecting modern urethroscopy of

THE HAHNEMANN HOSPITAL COLLEGE ... and must not be taken fr...

the anterior urethra. Dr. Geo. K. Swinburn, of New York, has perfected a prostatoscope by which we are able to see very distinctly the prostatic urethra and thereby treat directly any diseased condition present. To the use of these late instruments we are capable of directing therapeutic measures according to each individual condition. When urethral therapy has become perfected to the same degree as the means by which we are now capable of examination and the administration of medicaments, these diseases will become very simple. A recapitulation of the anatomical structures seen through the urethroscope will facilitate us greatly in the treatment of folliculitis. In observing the surface of a healthy urethra with one of the modern urethroscopes the following picture will present itself: Starting from the membranous portion of the urethra we will be confronted by the numerous striations, which suggest to the untrained eye an inflammatory condition, but as we withdraw the urethroscope the membrane appears less vascular, especially the longitudinal striations, the mouths of one or more of the follicles are seen along the superior surface, and as we reach the region of the glans penis the membrane presents a smooth surface, with but very little vascularity. The slightest pathological change modifies this aspect, and, instead of seeing a picture as above described, the membrane becomes irregular and highly vasculized in patches, the glandular elements show up clearly, and, while in a normal urethra the orifices of the glands and follicles may pass unobserved, now they may be distinguished by the fact that they appear as small punctiform spaces lying between the folds with a characteristic vasculized zone, as we will see later. Littre's glands are, as above stated, invisible in a normal and healthy urethra, but a diseased condition will invariably modify their appearance to such an extent that they can always be seen, and invariably in groups of three to five, with a slight vasculized zone surrounding each orifice.

We are here confronted with a class of cases having a lesion involving the glands and excretory ducts alone, and no amount of injection or irrigation per urethram will reach the disturbing element, as the glands are subepithelial and only the ducts are treated by the injection, and if the injection be one of the numerous astringents it will seal up the ducts, and the glandular drainage is inhibited only to be reestablished by the slightest urethral irritation. The gonococcus is invariably found in the secretion of the follicles, especially so if they have been kept in a dormant state for any length of time. The mucous membrane in a case of chronic folliculitis seems to become immune to a great extent to the certain culture, providing drainage has not been hindered to any great extent; whereas, if a group of these follicles become closed for any length of time, the gonococcus becomes virulent and a general reinfection is very likely to occur, thereby establishing in the patient's mind that he has become infected with a new gonorrhea, and some innocent individual is censured; or, on the other hand, the bride becomes the victim of gonorrhea and a lifelong sufferer, and the subject of many an operation at the hands of the gynecologist.

The treatment I have established in these selected cases of follicular inflammation of gonorrheal origin will, I hope, seem simple and effective if given a thorough trial. In the first place I have had manufactured a canula 20 cm. long, of No. 20 gauge, curved at its proximal end, so as not to obstruct the field of vision, and at the distal end I have a slight curved point made of platinum, which is much smaller than the canula itself, and is capable of being introduced direct into the orifice of the ducts. The syringe to which the canula is attached is made of glass and has a capacity of about 20 minims, and as the canula is made of eighteen carat gold we are privileged to use almost any solution without fear of erosion. Figure 1 will give a slight idea as to the general appearance of the instrument.



With the above described instrument at hand, and a urethroscope of not less than 25 French scale introduced in the urethra, I am ready to proceed. I generally irrigate the urethra first with a normal saline solution before introducing the urethroscope, so as to thoroughly cleanse it of all mucus, etc., and then with a suitable lubricant the urethroscope is introduced and a thorough search made for diseased glands, which will be recognized by the characteristic grouping and dilated ducts with a highly-vasculized zone, and in all probability the mucous membrane will be in a state of inflammation in the immediate neighborhood. With a 50-per-cent solution of peroxid of hydrogen in the syringe, I carefully introduce the point of the canula, as above described, into one of the ducts, taking care not to injure the surrounding membrane, and with a slight pressure a few drops of the solution are introduced into the gland, each duct being treated in the same way, until all diseased follicles are thoroughly injected, care being taken at all times not to use force in the injection, or else we may have an infiltration into the mucosa, thereby producing an ulcerating area.

After all observable glands have been treated, I again irrigate the urethra as before, then reintroduce the urethroscope, and with a 5-per-cent solution of albargin I treat each gland that has been previously treated by peroxid of hydrogen. And for the third time I irrigate the urethra, so as to remove the excess of medicament. The above procedure is repeated at least twice a week. After the first injection of albargin there will be an increase of the discharge for a few days. I prefer albargin to protargol, silver nitrate, or argyrol, for the reason that it carries a higher per cent of silver than protargol, and in equal strength, say 3 per cent and 5 per cent, it is far more of a gonococcocide than any of the above-mentioned drugs, and in conjunction with the above I usually inject into the urethra a couple of drams of a 5-per-cent solution of extract of suprarenal capsule, so as to produce vascular anemia of the mucous membrane, thereby ameliorating any engorgement which may be caused by the follicular injections. In regard to argyrol, it is very soothing as an injection in most any strength, but I can not indorse it as a perfect gonococcocide.

With careful application of the above treatment many cases will be permanently relieved of urethral irritation.

751 Sutter Street.

OBSTETRICAL TECHINQUE IN GENERAL PRACTICE.

By Z. Taylor Malaby, M. D.
Assistant to Chair of Obstetrics, Medical Department University of California.

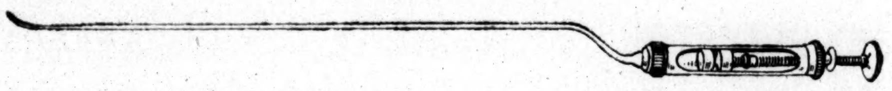
[A Lecture Delivered to the Senior Students, University of California.]

Obstetric antisepsis[1] dates from 1847. To Ignatius P. Semmelweis, a young Hungarian, who at that time held the position of assistant in the lying-in department of the Vienna General Hospital. belongs the credit of first demonstrating its efficacy. The obstetric service of the hospital was divided into two sections, in one of which instruction was given to midwives, in the other to medical students. It was with the latter that Semmelweis was connected. The students in this department were at the same time actively engaged in the pursuit of practical anatomy and pathology. The women were delivered by students, who, for a considerable portion of their time, were occupied with the operations of the dead-house and the dissecting-room. They took no precautions to cleanse themselves, except to wash their hands with soap and water, and they made examinations ad libitum. The death-rate was excessive, reaching nearly 10 per cent of the women delivered. Horrified at this frightful mortality, Semmelweis bent his energies to finding the cause. He was struck with the fact that in the midwives' clinic the death-rate was little more than 3 in every 100 women confined. The records showed also that women delivered before admission nearly all escaped. It appeared, too, that prolonged labors in the students' clinic were almost invariably followed by death, while in the midwives' section the length of the labor made little difference in the mortality. During the time that Semmelweis was engaged in his investigations, Professor Kolletschka, one of his associates, lost his life by a dissection-wound. The symptoms of his colleague's illness were entirely similar to those of the fatal malady which was raging in his own wards. Impressed with the identity of the two diseases, it dawned upon him that the cause of the deadly scourge was to be found in the infected hands of the students who attended the labors. In May, 1847, he established the order that students before taking charge of a labor case should wash their hands in chlorinwater or in a solution of chlorinated lime, and he restricted the number of examinations. The result was an immediate fall in the death-rate. In six months it had dropped from nine or ten to three per hundred, and in the second year of the new regime it did not exceed 1.5 per cent. No proof could be clearer of the correctness of his views, yet they were bitterly opposed by the profession. He struggled in vain for the acceptance of his theories. He was ridiculed and despised, and finally died insane, the victim of continued persecution.

---

[1] "Hirst's Text-book of Obstetrics."

Soon after its introduction into surgery by Lord Lister in 1866, antisepsis began to gain a permanent foothold in obstetrics, and nowhere do we find more striking proofs of the value of the antiseptic system than are shown in the diminished puerperal mortality and morbidity since its introduction into obstetric practice. Insurance reports show that of all deaths in women between the ages of nineteen and twenty-nine more than 18 per cent, and between twenty-nine and thirty-nine years more than 13 per cent, are due to puerperal causes. From 65 to 75 per cent of puerperal deaths are attributable to sepsis. It is fair to assume that these statistics have to do almost wholly with a class who are delivered outside of hospitals. This indicates a mortality that is truly appalling, especially when one reflects that it falls upon women in the prime of life and usefulness, and is the result of a preventable disease. Yet the disastrous effects of puerperal infection are not represented by the mortality alone. Thousands of invalid mothers owe their impaired health to the milder grades of sepsis in childbed. No stronger evidence could be offered proximal end, so as not to obstruct the field of vision, and at the distal end I have a slight curved point made of platinum, which is much smaller than the canula itself, and is capable of being introduced direct into the orifice of the ducts. The syringe to which the canula is attached is made of glass and has a capacity of about 20 minims, and as the canula is made of eighteen carat gold we are privileged to use almost any solution without fear of erosion. Figure 1 will give a slight idea as to the general appearance of the instrument.



With the above described instrument at hand, and a urethroscope of not less than 25 French scale introduced in the urethra, I am ready to proceed. I generally irrigate the urethra first with a normal saline solution before introducing the urethroscope, so as to thoroughly cleanse it of all mucus, etc., and then with a suitable lubricant the urethroscope is introduced and a thorough search made for diseased glands, which will be recognized by the characteristic grouping and dilated ducts with a highly-vasculized zone, and in all probability the mucous membrane will be in a state of inflammation in the immediate neighborhood. With a 50-per-cent solution of peroxid of hydrogen in the syringe, I carefully introduce the point of the canula, as above described, into one of the ducts, taking care not to injure the surrounding membrane, and with a slight pressure a few drops of the solution are introduced into the gland, each duct being treated in the same way, until all diseased follicles are thoroughly injected, care being taken at all times not to use force in the injection, or else we may have an infiltration into the mucosa, thereby producing an ulcerating area.

After all observable glands have been treated, I again irrigate the urethra as before, then reintroduce the urethroscope, and with a 5-per-cent solution of albargin I treat each gland that has been previously treated by peroxid of hydrogen. And for the third time I irrigate the urethra, so as to remove the excess of medicament. The above procedure is repeated at least twice a week. After the first injection of albargin there will be an increase of the discharge for a few days. I prefer albargin to protargol, silver nitrate, or argyrol, for the reason that it carries a higher per cent of silver than protargol, and in equal strength, say 3 per cent and 5 per cent, it is far more of a gonococcocide than any of the above-mentioned drugs, and in conjunction with the above I usually inject into the urethra a couple of drams of a 5-per-cent solution of extract of suprarenal capsule, so as to produce vascular anemia of the mucous membrane, thereby ameliorating any engorgement which may be caused by the follicular injections. In regard to argyrol, it is very soothing as an injection in most any strength, but I can not indorse it as a perfect gonococcocide.

With careful application of the above treatment many cases will be permanently relieved of urethral irritation.

751 Sutter Street.

OBSTETRICAL TECHINQUE IN GENERAL PRACTICE.

By Z. Taylor Malaby, M. D.
Assistant to Chair of Obstetrics, Medical Department University of California.

[A Lecture Delivered to the Senior Students, University of California.]

Obstetric antisepsis[1] dates from 1847. To Ignatius P. Semmelweis, a young Hungarian, who at that time held the position of assistant in the lying-in department of the Vienna General Hospital, belongs the credit of first demonstrating its efficacy. The obstetric service of the hospital was divided into two sections, in one of which instruction was given to midwives, in the other to medical students. It was with the latter that Semmelweis was connected. The students in this department were at the same time actively engaged in the pursuit of practical anatomy and pathology. The women were delivered by students, who, for a considerable portion of their time, were occupied with the operations of the dead-house and the dissecting-room. They took no precautions to cleanse themselves, except to wash their hands with soap and water, and they made examinations ad libitum. The death-rate was excessive, reaching nearly 10 per cent of the women delivered. Horrified at this frightful mortality, Semmelweis bent his energies to finding the cause. He was struck with the fact that in the midwives' clinic the death-rate was little more than 3 in every 100 women confined. The records showed also that women delivered before admission nearly all escaped. It appeared, too, that prolonged labors in the students' clinic were almost invariably followed by death, while in the midwives' section the length of the labor made little difference in the mortality. During the time that Semmelweis was engaged in his investigations, Professor Kolletschka, one of his associates, lost his life by a dissection-wound. The symptoms of his colleague's illness were entirely similar to those of the fatal malady which was raging in his own wards. Impressed with the identity of the two diseases, it dawned upon him that the cause of the deadly scourge was to be found in the infected hands of the students who attended the labors. In May, 1847, he established the order that students before taking charge of a labor case should wash their hands in chlorin-water or in a solution of chlorinated lime, and he restricted the number of examinations. The result was an immediate fall in the death-rate. In six months it had dropped from nine or ten to three per hundred, and in the second year of the new regime it did not exceed 1.5 per cent. No proof could be clearer of the correctness of his views, yet they were bitterly opposed by the profession. He struggled in vain for the acceptance of his theories. He was ridiculed and despised, and finally died insane, the victim of continued persecution.

---

[1] "Hirst's Text-book of Obstetrics."

Soon after its introduction into surgery by Lord Lister in 1866, antisepsis began to gain a permanent foothold in obstetrics, and nowhere do we find more striking proofs of the value of the antiseptic system than are shown in the diminished puerperal mortality and morbidity since its introduction into obstetric practice. Insurance reports show that of all deaths in women between the ages of nineteen and twenty-nine more than 18 per cent, and between twenty-nine and thirty-nine years more than 13 per cent, are due to puerperal causes. From 65 to 75 per cent of puerperal deaths are attributable to sepsis. It is fair to assume that these statistics have to do almost wholly with a class who are delivered outside of hospitals. This indicates a mortality that is truly appalling, especially when one reflects that it falls upon women in the prime of life and usefulness, and is the result of a preventable disease. Yet the disastrous effects of puerperal infection are not represented by the mortality alone. Thousands of invalid mothers owe their impaired health to the milder grades of sepsis in childbed. No stronger evidence could be offered than is afforded by the foregoing facts of the need of improvement in the obstetric methods of the general practitioner.

The obstetrician should always be clean; especially must his hands be clean, and he should wear clean clothing. It is well to avoid contact with pathological material, and, so far as possible, with other sources of wound infection. Yet attendance on postmortems and contagious diseases is not necessarily inconsistent with the safe conduct of confinements, provided a rigorous antiseptic cleansing be always observed as a preliminary to the care of the obstetric patient. After a septic exposure an entire change of clothing, and repeated and conscientious use of disinfectants, must be practiced before taking charge of a case. The writer has repeatedly attended a prolonged labor, has delivered by forceps, and has repaired perineal ruptures within one or two hours after having the hands bathed in offensive pus, without infecting the patient. Repeated scrubbings with hot water and soap, and with disinfectants, including the final use of the permanganate method, will, if properly executed, insure complete asepsis of the hands within an hour after the worst exposure. The rubber gloves may be worn to great advantage if the hands have recently been infected. They are always a valuable addition to the obstetrical bag. When summoned to a case of labor immediately after a septic contact, besides the usual care in disinfection, in simple labor all internal examinations may be avoided. In addition to this, it is possible, if thought necessary, to manage the birth even without contact with the external genitals of the patient, the required manipulations being conducted through the intervention of a fresh towel well saturated with the antiseptic solution. It is impossible, however, to lay down rules which alone will make an aseptic practitioner. The obstetrician must be possessed of an aseptic instinct, and this is a matter which comes of training and a keen appreciation of the possible sources and modes of infection.

For the disinfection of the hands the following method, which is substantially that of Furbringer, is recommended: 1. Clean the nails dry. 2. Scrub the hands and forearms not less than three minutes, with a hand brush, with soap and water as hot as can be borne; special care must be taken in brushing the nails and finger-tips, and the water should be changed two or three times. 3. Soak well with alcohol (not below 80 per cent), and before it evaporates. 4. Immerse for three minutes in a hot solution of mercuric chlorid 1:2000 to 1:500, or in a 3-per-cent solution of carbolic acid. Undoubtedly, the most essential step in the process is the soap and water scrubbing. It not only removes the greater part of the offending material, but it is also indispensable to the proper action of the antiseptic solution. The latter can penetrate the skin only after the oily matter has been removed, and after the skin is thoroughly wet. The use of alcohol helps the action of the chemical solution by dehydrating the skin and rendering it hygroscopic, thus favoring penetration of the solution.

The safer course for the prevention of puerperal sepsis, at least for general use, is undoubtedly the restriction of internal examinations as much as practicable, and of the preliminary vaginal douche to cases in which the secretions are pathological. In the presence of purulent gonorrheal discharges, both the vaginal and cervical canal, as well as the vulva, ought to be cleansed carefully with soap and water, and gentle friction with the fingers, and subsequently washed well with antiseptic solution. In extreme cases the disinfection may be repeated at intervals of two or three hours during the labor. This is required, not only in the interests of asepsis for the mother, but as a prophylactic against ophthalmia in the child. Mercurials, however, are not suitable for the purpose, owing to the danger of mercurial intoxication. Mercury has been found in the stools after a single vaginal irrigation. Some of the non-toxic disinfectants, such as creolin, peroxid of hydrogen, or the chlorinated soda solution, are to be recommended.

Dr. F. H. Wiggin, of New York, in the *Journal of the American Medical Association,* says: It seems strange that we are obliged to admit that puerperal wound infection in the ordinary daily practice of physicians is of almost as frequent occurrence, and is followed by as severe constitutional symptoms, and with as high a rate of mortality, as it was fifty years ago. Many physicians have been slow to grasp the importance of the principles underlying modern surgical teaching, or, while knowing these principles, they have yet failed to apply them to obstetric work, and consequently have not profited by them. They are still too often seeking consolation and explanation of the fever and other constitutional symptoms complicating the puerperal convalescence in the possibility that the disturbance arises from the beginning of lactation or from the specific poisons causing malarial or typhoid fever, instead of attributing those symptoms to their true cause, in almost every instance, wound infection. The "Journal" comments editorially on the above-mentioned article as follows: "Dr. Wiggin has given utterance to what is, unfortunately, too true. We are almost ready to make the statement even stronger than he has made it. We believe we are safe in saying that statistics, if carefully compiled, would show that in private practice the mortality from puerperal sepsis is greater to-day than in the pre-aseptic period. The great maternity hospitals, like the Rotunda at Dublin or the Maternity at Prague, show an astonishingly low death-rate from this cause, and this in spite of the fact that students witness and assist at the deliveries, and are permitted to make examinations. But it is this very fact of the striking reduction in the number of fatalities from puerperal fever in these great lying-in hospitals, where a few decades ago this dread disease destroyed so many lives, that has made physicians bold. Knowing that asepsis and antisepsis have wrought the marvelous change in the morbidity and mortality records in the hospitals, the physician feels that if he is aseptic in his work his record will be as good, and he can do practically what he will." The old rule of "meddlesome midwifery is bad" is cast aside. With improved forceps of several patterns, with chloroform given with practically no danger, even the careful physician feels justified in early instrumental interference, resorts to version on slight provocation, is indifferent to lacerations because he can sew them up immediately, is digitally diligent in determining the progress of the labor, in fact, he hesitates at none of these, because he has practically no fear of sepsis. And why?—Because by his side is a bowl of bichlorid solution, or of carbolic acid, or of some other favorite antiseptic, into which he dips his fingers, his silk, his forceps, perhaps flattering himself that in this way he is rendering himself clean and protecting his patient from harm. There is a slip somewhere in the technic of his asepsis, and the deed is done. The brush with which he cleans his hands may be foul, the towel soiled, or with clean hands he handles a chair, or the patient's hand—in any one of a thousand ways he may commit an error that will account for the unfortunate result. And then, though he may have been scrupulously careful, an ignorant nurse may spoil it all with her dirty douche-point or her unclean hands. These tragedies are occurring every day, and that, too, right in the midst of our large cities, where there are hospitals and medical schools in which the technic of surgical cleanliness is properly taught. It is time that the profession should wake up to the fact that an operation that is surgically unclean is often worse than no operation at all; that a careless obstetrician, overconfident because of his fancied protection by his so-called asepsis, may be a breeder of most serious mischief. The statement that the lying-in woman is aseptic is so true that the physician should enter upon the task of the delivery of such a one with as much caution and as much intelligent, painstaking preparation as in entering a surgically-clean abdominal cavity. Most physicians are conscientious in these matters, and the fault lies, when these mistakes occur, in some little slip in the aseptic measures, or in a too great readiness to interfere, thus producing serious local damage that favors infection. The remedy lies in a clearer knowledge of the importance of details in asepsis, and in a faithful observance of the same in every case.

Out of the great number of physicians who graduate every year, comparatively few have received any practical training in the art of obstetrics, except as they have witnessed five or six deliveries in a well-appointed maternity hospital, and not one in a hundred has had the actual management of a case throughout the pregnancy, labor, and puerperium. While hospital training lays the best and most substantial foundation for future success in medicine and surgery, it can not, from the very nature of the case, do more than qualify a student in hospital methods; and these are, of necessity, so vastly different from the methods of the practicing physician that there can be little comparison between them. Nor can books, written from the hospital point of view, giving hospital statistics and hospital results, do otherwise than impart to their readers the hospital side of the question, so that, whether or not a student has served as an interne in a lying-in institution, he usually views the matter, at the beginning of his practice, in the same light. Let him know his theory ever so well, it will serve him to little purpose until he is able to apply it properly; and this ability can only come of actual experience and a thorough knowledge of the conditions that are encountered in private practice.

It is a noteworthy fact that the average physician does not, in the early years of his practice, get entirely satisfactory results in his obstetrical work. He may succeed in keeping his mortality record down to a legitimate point, but his morbidity rate is usually far higher than it should be, and this through no fault of his own. Unfortunately, a course in obstetrical technic as applied to private practice is not, as yet, considered a necessary adjunct to the regular medical curriculum; and while the student is taught how to perform cephalic version and apply forceps before the head has entered the pelvic brim, he is not taught how, under the most discouraging circumstances, to manufacture surroundings that will enable him to conduct a normal case of labor in an absolutely aseptic manner. Normal deliveries are such commonplace, every-day affairs that many physicians will make more elaborate preparations for the amputation of a toe than for the management of an ordinary obstetrical case. The obstetric call may come at the most inconvenient time—late at night, in the early hours of the morning, at the beginning of a meal, in the midst of a press of other work—but no one should practice obstetrics who does not make it an inflexible rule to give such a summons precedence over everything, over personal convenience and all other engagements. He should have always ready and in waiting a complete aseptic obstetric bag, similar to this one I will offer for your inspection, which was designed by me for use in the Out-patient Obstetrical Department of the University of California.

The bag is the ordinary obstetrical valise 6x18 inches and 8 inches deep, and contains the following articles:—

A. Appliances.—Two copper trays, one 5x16 inches and 6 inches deep, for boiling the instruments; the other 4x14 and 5 inches deep, resting within the former, for use at the bedside, containing an antiseptic solution for sponges, rinsing the hands, etc.

One Kelly pad, of large size, with apron and not with sleeve, and contained in a small linen bag.

One small scales, for weighing the infant.

B. Drugs.—Alcohol, four ounces; chloroform, Squibbs,' four ounces; fl. extract ergot, two ounces; lysol, four ounces; boric acid, small vial; bichlorid tablets, one bottle; Tr. green soap, two ounces.

C. Dressings.—Boracic acid gauze, ten per cent, in one yard packages, for sponges, etc.; absorbent cotton, four-ounce package.

Instruments.—One obstetrical forceps, of such pattern as the physician may prefer; one female catheter, glass, metal, or soft rubber; one large, straight scissors, for cutting gauze, sutures, etc.; one double-current uterine douche-tube; one dressing forceps, large; two Kocher artery forceps; one case containing two knives; one perforator; one hook and crochet; half dozen needles, threaded, with No. 2 catgut, hermetically sealed in glass tubes.

The instruments are carried in a linen case.

Miscellaneous. — One douche-bag, four quarts; one pair rubber gloves; one muslin operating gown, sterile, and contained in a small bag; one new nail-brush, to be replaced after each case.

With the above satchel and contents, the general practitioner is ready to cope with any emergency whatever in obstetrical practice.

The bag, Kelly pad, douche bag, and copper trays should be washed in a 5-per-cent formalin solution, the bottles washed and refilled, the linen case and instruments boiled, and, in short, the entire outfit rendered sterile and in readiness for the next call. This is very important, as I have known infection to be carried to several consecutive cases through the media of the obstetrical bag. Since the organization of the Out-patient Department in Obstetrics, University of California, fifty indigent women have been confined by myself and the senior students, using this simple technic, in the tenement-house districts, without the slightest evidence of infection.

PLAGUE CASES 91 to 93

Case 91. Wong Hoi, age 36. This case was first seen by this office at 3 P. M., November 18, at No. 7 Brenham

Place. At that time the principal external pest evidence was a very large bubo in the right inguino-femoral region, with extensive periglandular edema, extending down almost to the knee and up on the abdominal wall about half way to the umbilicus. A similar condition, but to a much less degree, existed in the left inguino-femoral region. Some of the glands of the neck were also enlarged, and there was a bloody expectoration, which microscopically showed evidence of plague. The patient died at 1:30 A. M., November 19. The necropsy began at 11 A. M. The body is that of a well-developed, very well-nourished Chinaman. There is a well-marked phimosis, and the dartos and prepuce are edematous. There is no evidence of gonorrhea in the urethra nor ulceration in the prepuce or penis. The testicles appear normal. Section of the right inguino-femoral region reveals very much enlarged hemorrhagico-necrotic glands, embedded in an extensive hemorrhagic edema, which fades off into a sero-gelatinous edema. The consistency of the enlarged glands is soft. There are no dilated lymph channels connecting the glands, nor is there any cutaneous evidence of lymphangitis, the lesion being solely one of lymphadenitis, with extensive periglandular edema. The muscles in this region are pale and watery. A similar, but less marked, condition exists in the left inguino-femoral region. The iliac and lumbar glands on the right side are very much enlarged and much more hemorrhagic than those of the cruro-inguinal region, and the surrounding edema is far more hemorrhagic. The consistency of the glands is much softer, some of them being almost completely broken down. The hypogastric glands are swollen and more necrotic and less hemorrhagic than the before-mentioned glands. The postperitoneal glands on the left side are in a state of acute pest inflammation, but to a less marked degree than their fellows. The spleen is enlarged. The capsule is tense. The trabeculae are distinct, and the Malpighian corpuscles are small. The pulp is soft and diffluent. The pancreas seems injected. There are no hemorrhages. The suprarenal capsules appear normal. The kidneys show acute nephritis. The bladder is firmly contracted, and contains no urine. The liver is negative. The mesenteric glands are not enlarged. There is an acute hemorrhagic gastritis, with a few ulcers along the longitudinal folds. The left ventricle of the heart is firmly contracted; the right ventricle somewhat flabby. The mitral valve at places is thickened, but the auriculo-ventricular opening is not dilated. The tricuspid opening admits about three and one-half gloved fingers. There is an acute myocarditis. The lungs are edematous, and the lower lobe of the left lung shows a few areas of broncho-pneumonia. The tonsils are very much enlarged, necrotic, and at points hemorrhagic. The tissues surrounding them are quite edematous, the edema extending on the epiglottis and the uvula. The cervical glands on both sides of the neck are enlarged, and show areas of necrosis and hemorrhage. Microscopy.—Smears from the cruro-inguinal glands of the right side show numerous pest-like organisms. Smears from the spleen show only a few diplococci. Smears from the tonsils show pest-like and other organisms. Probable cause of death, tonsilo-bubo-pneumonic plague.

Case 92. Leong Sen, age 50, died November 26, at 838¼ Washington Street. Body that of a fairly well-nourished, well-developed Chinaman, showing no external evidence indicating the cause of death, save the black san treatment. The lungs show numerous areas of broncho-pneumonia. The heart shows some thickening of the cardiac valves and acute myocarditis, but otherwise appears normal. The spleen is somewhat enlarged and soft. The stomach, the pancreas, the suprarenal capsules, and the bladder are negative. There is an acute nephritis. The peritoneal and mesenteric glands are normal; the axillary glands are enlarged, show cortical injection, but no surrounding edema. Microscopy: Smears from the areas of broncho-pneumonia show numerous pest-like organisms, along with some diplococci. Probable cause of death, broncho-pneumonic plague.

Case 93. Leong Yuen Yum, age 38, died at 10 A. M., December 11, at 726½ Pacific Street. Autopsied 3 P. M. same day. Case not seen clinically by this office. The body is that of a well-nourished Chinese male. Inspection shows two lesions on the skin over the abdomen, about half way between the umbilicus and the left anterior-superior spine of the ilium. These lesions both present the following characteristics: They are round or slightly oval, about two inches in diameter, and presenting three zones, namely, a central zone about one-half inch in diameter, showing moist gangrene; externally to this there is a narrow zone occupied by a bleb annular in form; externally to this a zone of hyperemia and hemorrhages. Section made through the skin in one of these areas, and smears made from the serum exuding from it, when stained, showed large numbers of pest-like bacilli. The glandular region which drains this area, namely, the left inguinal, and, to a less extent, the left femoral, shows pest adenitis. Other pathological conditions noted were: Hyperplasia of the spleen; cloudy swelling of the liver; congestion and cloudy swelling of the kidneys, and slight thickening of the mitral valve of the heart. The lungs were somewhat congested, but in no part consolidated. The intestines appeared normal. Smears from the glands in the left inguino-femoral region and from the spleen showed large numbers of pest-like bacilli. Provisional anatomical diagnosis: Bubo-septicemic plague. Animal inoculated, and cultures taken from the spleen, gland, and heart blood.

DEPARTMENTS

OBSTETRICS AND GYNECOLOGY.

By WALLACE A. BRIGGS, M. D., Sacramento, Cal., and GEORGE B. SOMERS, M. D., San Francisco.

Suppurative Tubal Disease.—In an interesting article on suppurative tubal and ovarian disease by J. J. Gurney Williams, of Philadelphia, he emphasizes the following points: (1) That gonorrhea is by far the most frequent cause of suppurative tubal and ovarian disease; (2) that vaginal puncture is dangerous and unsurgical; (3) that the mass should always be removed through an abdominal incision; (4) that plain sterile water should be used in all abdominal operations; (5) the use of mercury, permanganate, or any antiseptic, except alcohol, is unnecessary in the preparation of the operator or assistants, as cleanliness is the great point, and may be obtained by soap, water, and brush, using many changes of water and taking many minutes to scrub; (6) that silk should be used in all tying within the abdominal cavity; (7) that an absolute differential diagnosis previous to operation is in the majority of cases impossible; (8) that the cases in which drainage is used usually do better than those not drained; (9) the absolute avoidance of morphin, or any form of opium, before or after operation; (10) that the objections to operations are not founded on fact, and that there is not enough concensus of opinion that these suppurative conditions should always be operated upon. —Philadelphia Medical Journal, Nov. 8, 1902.

[Note.—Exceptions may be taken to several of the above statements. Very briefly (2), there is a considerable difference between vaginal puncture and vaginal section. Opening and draining an abscess by vaginal section is sometimes the only safe course to pursue. (4) Normal salt solution, sterilized, agrees with the tissues much better than plain water, and large amounts may be left in the abdominal cavity with impunity. (6) There is no good reason for using silk sutures when absorbable will do the work just as well, and leave nothing behind. (9) Though morphin is to be avoided, an excellent substitute is to be found in heroin, given hypodermatically. This drug has no bad after-effects, and does not seduce.—G. B. S.]

Accessory Labia—Robert L. Dickinson calls attention to the presence of accessory labia in a certain proportion of cases. "Starting from the middle of the outer aspect of the labium minus, a wrinkled and pigmented fold crosses the gully between labium minus and labium majus to the majus, on the inner surface of which it loses itself in its course diagonally forward and outward or directly forward. It may be one-sided or double. It may be located only on the inner aspect of the labium majus, paralleling or duplicating the labium minus. These folds are found in eight per cent of my cases, left-sided enlargement preponderating a little, as in the case of the labia minora."—American Gynecology, September, 1902.

Ice Following Abdominal Section.—At the last meeting of the American Association of Obstetricians and Gynecologists, Dr. F. F. Simpson, of Pittsburg, advocated the local use of ice for the relief of pain, to prevent or control peritonitis, and to limit the development of morbid products following operation. He began the use of ice after observing its effects in several hundred cases of pelvic peritonitis prior to operation. The post-operative use of ice should be more effective than its use before operation, owing to the much smaller number of infecting organisms present. In his experience, no injury of the skin had followed, the healing had not been retarded, and no systemic depression had been noted. He attributed the beneficial effect to its prompt and deep penetration. Boklikoff showed that cold actually penetrated deeply into the human cavities and tissues. Experiments on dogs were detailed, showing that by the local use of ice a degree of cold can be produced in the abdominal cavity sufficient to retard the growth of bacteria and to contract the blood and lymph-channels, without detriment to life or tissue.—American Gynecology, October, 1902.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE

By A. W. Hoisholt, M. D., Stockton, Cal.

The Etiology of Dementia Paralytica in Sweden.—At the fourth Scandinavian Congress for Internal Medicine, which met at Helsingfers, Finland, in July this year, Dr. Marcus stated, after going over the opinions on the subject held in different countries, that the idea that syphilis is the chief cause was gaining more and more ground. He reported his study of over 400 cases of this disease treated in the hospitals of Sweden during nine years, from 1887 to 1896. He emphasized that it was only among people of the higher class that one could get reliable, anamnestic information, and he had made a separate account of what one etiologically would ascertain among these classes of people. Syphilis was found in not less than seventy-five per cent of the cases, and from a couple of hospitals for insane, where the information obtained was especially accurate, the report was eighty-seven per cent. Hereditary disposition to mental diseases was just as frequently met with in dementia paralytica as in other forms of insanity. One can, however, not deny the possibility of the influence of other causes upon the development of general paralysis, but everything spoke for the opinion that syphilis was essential to its development. This opinion was well supported by the fact that arteritic changes, especially in the aorta, were found in nearly all these cases, and they had the appearance which is considered specifically characteristic of syphilis.—Hospitalstidende, Sept. 3, 1902.

Mental Diseases of Children.—In a recently-published paper on this subject, Dr. F. X. Dercum, of Philadelphia, compares the insanities of childhood with those of adult life. He first makes a general grouping of adult insanity as follows: (1) Delirium, confusion, stupor, presenting hallucinations, illusions; (2) melancholia, mania, and circular insanity; (3) paranoia; (4) neurasthenic insanity, in which the neuropathic constitution is a necessary prerequisite to a neurasthenic constitution to develop insanity; (5) dementia. Dr. Dercum then compares these groups with the insanities observed during childhood. Beginning with the first group, he says children suffer with delirium in febrile diseases very frequently; the hallucinations and illusions are vivid, and the illusions are as evident as in the adult. After exhausting affections, such as typhoid, children are often seen in states of confusion and stupor, which do not differ from the corresponding affections met with in adults. As regards the mental symptoms observed in the second and third groups, these are seldom found in children. The emotional development in a child is not sufficient to admit of real melancholia, exaltation, or mania. Paranoia also presupposes an intellectual development sufficiently far advanced to enable the patient to evolve complex and well-ordered systematized delusions. A child may, however, exhibit excessive fear, shyness, morbid conscientiousness, confess imaginary sins, show abnormal exaltation and excitement, or make precocious religious professions, all of which manifestations may be looked upon as vague and ill-defined preliminary symptoms of later mental defects. They suggest melancholia on the one hand and mania on the other. Typical mental diseases, however, only become noticeable as we approach puberty, the influence of heredity not being able to make itself felt till there is a certain amount of mental development. Suicide in children rarely occurs in a true attack of melancholia; it is, as a rule, the result of fear of punishment or revolt against discipline. The fourth group, the neurasthenic insanities, may occur in children, but with two qualifications. They are, in the first place, far more rare in adults, and, secondly, they are not as well defined, both facts being doubtless due to the fact that the mind is less mature. There are noted abnormal fears, painful indecision, tyrannical obsessions, irresistible impulses, but the symptoms are ill defined and changeable. Neuropathic stigmata, such as anomalies of features, arrested development, etc., are usually present, and the child is occasionally abnormally precocious. These neurasthenic tendencies may be prodromal to the dementia praecox of Kraepelin. In the fifth group, dementia takes the form of dementia praecox, which in its onset may antedate puberty or not come on till some time afterwards. It is a type which begins insidiously; it may present itself in various forms, and its symptoms are manifold. The patient may be slow to learn, or, on the other hand, having been bright, becomes listless and inattentive. He may be given to running away without reason, and other similar acts. The disease is seldom recognized as such before puberty, and its many symptoms develop after the patient has passed beyond the age of childhood. Among the specific forms of insanity met with in the adult which may be met with in children, the writer mentions juvenile paresis. He finds it rare, and considers syphilis its etiological factor. The disease appears to be similar to that of the adult, except as regards symptoms depending upon a mature mental organization, namely, the elaborate and well-defined delusions. The symptoms of the infantile form of hysterical and epileptic insanities are essentially the same as in the adult. The form in hysteria is that of delirium, occasionally accompanied by excitement or confusion. In epileptic insanity we find attacks of delirium, or mental confusion and stupor, with dulling of the mental faculties, a mild dementia.—Philadelphia Medical Journal, American Journal of Insanity, October, 1902.

The Physician's Duty to Refrain from Disclosing Professional Secrets.—An article in the "Deutsche. Med. Zeitschrift," No. 62, 1902, reports the following: A widow in Nurnberg gave birth to a child, murdered and mutilated it, and concealed it in a jar under the bed. The woman died shortly afterwards with symptoms of blood-poisoning. The physician who treated the patient was said to have discovered the mutilated remains of the infant without making any report to the police about his discovery, because he thought that by doing so he would conflict with the law on privileged communications. The court is said to have decided in his favor. —Hospitalstidends, Aug. 13, 1902.

MATERIA MEDICA: THERAPEUTICS

By Z. Taylor Malaby, M. D., San Francisco.

Bromism.—Defendorf, in "American Medicine," noted six cases of bromism among patients admitted to the Connecticut Hospital for the Insane during the past three years, and calls the attention of the general practitioners to the common abuse of the bromides in the treatment of mental diseases.

Brewer s Yeast in Therapeutics—According to Vullman, in the same periodical, brewer's yeast, because of its ferments, nuclein, nucleinic acid, and phagocytic action, is a remedy of value in therapeutics. It has proven itself of value in furunculosis, carbuncles, diabetes, tuberculosis, bronchitis, bronchopneumonia, enteroptosis, habitual constipation, cancer, and other affections.

Aspiration as a Cure for Pleurisy with Effusion.—Delafield, in "Annals of Surgery," says: Aspiration is the only treatment needed for pleurisy with effusion. In a large number of cases pleurisy is cured in a week, and no case ought to be sick longer than two weeks.

Orthoform in Gastric Ulcer.—Frank H. Murdock, in "New York Medical Journal," speaks encouragingly of orthoform as an aid in the diagnosis of gastric ulcer. He found by the administration of a ten-grain powder at night that the patient would be free from gastric pain, and sleep well. When powder was not given, patient suffered much pain. In suspected cases, a ten-grain powder of orthoform relieved the severe pain in twenty minutes. As soon as the diagnosis was made, the use of the drug was discontinued.

Occidental Medical Times

Communications are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author. Published monthly.

Office of Publication, : : : 1121 Sutter Street, San Francisco.

THE PLAGUE AND THE CONFERENCE OF STATE BOARDS OF HEALTH.

During the present month the subject of plague will receive renewed attention at the Conference of State Boards of Health to be held in Washington in compliance with the demands made upon Surgeon-General Wyman. There can be no doubt but that the conclusions of this body will be reached only after most mature deliberation. It is the duty of these representatives to consider the situation not from a political and financial point of view, but from that of protection and prevention. It is this feature especially that causes our only uneasiness and that demands an insistence on the complete fulfilment of any regulations arising out of this meeting.

The situation here is still both serious and unfortunate. The occurrence of cases is verifying the world's history of the disease. The last summer brought forth an increase in the number of cases, a more virulent character of the disease, and rats are becoming more frequently infected. Politically conditions are far from satisfactory, and, although the diagnosis can not be denied, certain elements are at work that will leave the question of eradication still a matter of some conjecture. It can not be too emphatically insisted upon that politics and finance should not be allowed to override the absolute necessity of definite preventive measures.

At this conference California will have no representation in complete sympathy with the truth. Some member of the State Board will be on hand to flaunt its noble and efficient solicitation for the health of the people of this community before that body. This action will be aided by influences that have appeared upon the scene for the purpose of pacifying and learning the true state of affairs. The ultimate result will be watched with much interest; but so far the future has seemingly been rendered more difficult of interpretation. Dr. Pardee's assumption of office is supposed to afford material aid; but any measures that he may have had in mind have been handicapped. For, convinced as he is of the diagnosis and determined as he may have been to use the most advanced measures for relief, he will be confronted with a State Board, holding over for two years at least, that has defiantly denied the facts; and which, as they assert, backed up by a report that the state is not now and never has been infected with plague, will be given a tenure of office unassailable for their full legal term. It will be reported that San Francisco alone is the evil spot. Whereupon the State Board will withdraw, as it has already reported, from the field, with much consolation to itself, leaving the burden and blame to the local board, which for all practical purposes exists in name only. Hence, no matter what may have been the intentions of Dr. Pardee, he can not be so foolish as to force any conviction of his own upon the board or open the question again, nor would the corporate interests of this state allow it. He is bound hard and fast by the very means that were supposed to give him command of the situation. Under such restrictions the state can not be quarantined. It would be a useless procedure.

Thorough inspection of the city and state by competent, honest, and disinterested men, detention of contacts, disinfection and possibly destruction of buildings, will alone give confidence and will alone prove effective in staying the contagion, for its complete and absolute extirpation is probably impossible. That such measures may be carried out, the history of the affair demands that we must look beyond the State of California. The recent outbreak at Mazatlan, Mexico, emphasizes this position, and our only hope rests with the national government through the Marine Hospital Service, which shall be allowed to enter every locality, untrammeled and uninfluenced by persons or politics, and to see that this is done is the most urgent duty of this conference.

THE DEPARTMENTS.

With this issue we resume the abstract department. Each section has been entrusted to men thoroughly versed in the special line of work. Every endeavor will be made to surpass, if possible, the very great value of this department in former years. It has been a matter of great concern that this work could not have been continued; but circumstances have so shaped our affairs that the resumption will be accomplished with the full confidence that the reviews presented to our readers will be valuable, and contain the latest ideas in the medical world. That this work can be done satisfactorily, we urge that our exchanges be sent promptly and regularly, thus enabling a careful review of their pages.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, June 23, 1902.

The president, H. H. Look, M. D., in the chair.

SMALLPOX IN A FOUR MONTHS' FETUS.

Dr. John White presented a four month's fetus, which was pitted with smallpox. About five weeks ago I was called to attend a woman with smallpox, who was about four months pregnant. She recovered nicely. About four weeks ago I was called one morning about 3 o'clock, and found that she was about to have an abortion. I brought her to the County Hospital in the morning, and the abortion was completed. On examining the fetus, I found that it was pitted with smallpox pustules. I put it in alcohol, which has faded nearly all the pustules. Immediately behind the arm and on the back there are two or three pustules still visible. After the abortion there were quite a number to be seen on the head and body.

RESPIRATION IN HIGH ALTITUDES.

Dr. W. A. Briggs: Recently, while on my vacation near Lake Tahoe, I made some observations as to respiration in high altitudes, which to me were novel and interesting. One patient, a woman seemingly in perfect health, showed marked changes of respiration, a typical Cheyne-stokes. The first movement was short, the second longer, the third reaching a maximum, followed by two others, shading off into a period of apnœa of eight seconds' duration. These changes were repeated during sleep, with variations at different times, for two weeks. Another case, that of an adult, also a woman, seemingly in perfect health, with the exception of a slight cold (and, by the way, I should say the former patient also had a slight cold), had respirations of moderate depth, then a deep sigh, and then a period of apnœa of about four seconds, recurring rhythmically. Another case was that of myself. In my own case I could not observe respiration while sleeping, but, as I fell into a doze, I would find myself suffering with a sort of dyspnea, a sort of precardial distress, and would wake up suddenly, and then take a few deep inspirations. I would then drop into a doze, only to find myself in the same condition repeatedly. In conversing with several people there, I found that something similar was frequently observed. In looking for an explanation, I do not know that I have arrived at anything satisfactory, but it seems to me there are several factors to be considered. In the first place, the diminished atmospheric pressure promotes a congestion of the mucous membranes of the nasal sinuses, and very likely of the bronchial mucous membrane and pulmonary vesicles. It does certainly increase the tendency to nasal stenosis. I observed that those suffering with catarrh had more difficulty in nasal respiration than similar cases on the level here. Then diminished supply of oxygen under diminished pressure would diminish the amount taken up by the blood. Then, too, this would produce an increased respiratory movement, and exhaust the respiratory muscles, and very likely exhaust the respiratory center, and in certain cases in which the heart is not strong, would produce an enlargement of the right heart. These three factors,—(1) greater or less obstruction of the air passages, (2) markedly diminished supply of oxygen, (3) exhaustion of respiratory muscles and respiratory center,—would furnish at least a clue to the etiology of the condition discussed.

SYPHILITIC INTERSTITIAL KERATITIS.

Dr. W. E. Briggs read a paper with the above title.

Dr. H. S. McGavren: We should bear in mind the fact that interstitial keratitis sooner or later affects both eyes. Occasionally both become involved at the same time. I have a case under my care at present in which the disease came on simultaneously in both eyes; the patient, a young woman fifteen years of age, gave a history of good vision until the fourth of July, when a firecracker was exploded near the eyes, and vision became impaired very rapidly. It was a clear case of interstitial keratitis, and the eyes are clearing up together. Another case was sent from a distance, with complaint of poor vision in the left eye, of about a week's duration. On examination of the other eye, some faint opacities were visible in the deeper layers of the cornea, and in a very few days the eyes looked alike. Dr. Briggs' injunction to use atropin freely in syphilitic iritis is correct, and it should be used early, or adhesions will form in some cases, which the free use of the drug later will not separate. In all eye diseases due to secondary syphilis, mercury is a necessity, and, like the atropin, should be used early, with a view of getting its effects as soon as possible. I recall the case of a woman who came to my office complaining of a sudden blindness of the left eye. The opthalmoscope showed the vitreous full of fine, dustlike opacities. Syphilis was denied. I ordered pills of protoiodid of mercury, one-quarter of a grain four times a day. She returned in two days, no better, trouble commencing to develop in the other eye. I ordered her to take six pills a day, but, not understanding my directions, she took four pills at a dose, and took six doses a day. She returned in three days, with good vision, but was thoroughly salivated.

Dr. Poore: I remember a case of conjunctivitis of syphilitic origin that was treated locally by inunction of mercury, and the results were very good. No internal medicine was given. Afterwards the patient was put on iodids, then upon iodid of mercury, with iodid of potassium. I think the result was more rapid than where the mercury is given internally at first.

Dr. J. H. Parkinson: The interesting point of this subject, to me, lies largely in the fact that in several cases I have found the oculist make a correct diagnosis of the presence of syphilis in cases in which it was not suspected. I have in mind two patients just now in which there was absolutely no evidence of constitutional trouble nor any evidence of general infection nor any general symptoms, and in which the only manifestation was a slight visual derangement. In one of these cases, that of an elderly lady of unimpeachable respectability, it seemed difficult to see how it was possible for syphilis to be present. I am willing to give every credit to Dr. Briggs for making this diagnosis, and for his persistency in the faith that was in him. There was no doubt as to the correctness of the diagnosis, as the case got well under specific treatment. From first to last there was nothing whatever to show the existence of the disease, as it had not advanced to a point where it caused any serious damage to the patient. Another case was that of an elderly man, with much the same conditions obtaining.

Dr. S. E. Simmons: Dr. Briggs' paper calls to mind a case that came under observation showing an unusual tolerance to the iodids. The patient was a woman, who, eighteen months previously, had had the inner third of the right clavicle removed for what was pronounced to be osteo-sarcoma. There was a slight recurrence at the site of the trouble, but a similar growth occurred on the outer maleolus of the left leg, reaching to nearly the size of a navel orange. The patient was placed on iodids, about four hundred and fifty grains a day, with marked effect on the swelling, and in less than four weeks it entirely disappeared. The patient was a woman of respectability. I lost track of her for a number of months, but she came back recently, having a small growth in the lower tarsal fold, for which she had been treated unsuccessfully elsewhere. Conjunctiva was swollen to about the size of a pea. She was again placed on iodids, four hundred grains daily, which showed a slight influence on the growth in the margin of the lower lid. Feeling that we were right in the diagnosis, she was placed on iodin, twenty-five per cent, and now the growth is going away. I do not remember to have seen any other case showing such tolerance to the iodids.

Dr. H. H. Look: In regard to the general practitioner overlooking syphilis in the eye and nose and throat, I find it quite common. Patients will resort to the specialist and complain of all sorts of things, but will, of course, deny any knowledge of syphilis; in fact, it is hardly worth while asking them any questions about it. You will find syphilis in all walks of life. I think it is generally considered mildly epidemic. Whenever I see signs of syphilitic manifestations of the throat and eye, I take it for granted that syphilis exists, and go ahead. In ninety per cent I judge I am not wrong in the matter. Syphilis is one of the most prolific causes of diseases of the eye. I do not know of any other form of trouble that human flesh is heir to that causes such an infinite variety of ocular trouble as syphilis. The treatment, of course, is well known. The remarks of Dr. S. E. Simmons are exceptional in my experience in regard to the tolerance of iodids. I have not observed such a tolerance; I suppose such to be the exception. I find the most difficulty with syphilitic manifestations that are inherited; they are most difficult to me to handle, and when I see one of these, I rather wish it had gone somewhere else than to me.

Dr. W. E. Briggs: I will add that we do not expect a marked influence upon the course of interstitial keratitis from the constitutional treatment. The local treatment is the essential thing in this disease. I always give medicine with the hope of improving the constitutional condition, but rely entirely upon the local remedies to combat the eye disease. When I began the practice of medicine, interstitial keratitis was not recognized by all specialists, and I remember one of the first patients I had was a student in a local college. I predicted that his eye would not be well before six months or a year, and that the other eye would become similarly affected. As a result of my unpromising prognosis, he went to a much older man in a neighboring city, who, unfortunately for the young man, did not recognize the nature of the trouble, and promised that he would be well in four weeks. After six months of various kinds of harsh treatment, he returned to me with corneal leucoma, which never did clear up. It is well to have our patients know at the beginning of treatment the chronic nature of the trouble.

Regular Meeting, August, 1902.

MULTIPLE FRACTURE OF THE PATELLA.

Dr. G. A. White reported a case of compound comminuted fracture of the knee-cap. The patient, a young man, was thrown from a vehicle, due to a runaway team. The knee-cap was broken into eleven pieces. When he reached Sacramento, two days after the accident, his knee was enormously swollen, and badly discolored from effusion of blood in the knee-joint and tissues above the knee. I put in the aspirator for exploratory reasons, and found that the blood in the joint was coagulant, obtaining but little blood from the aspirator. The day following I made a transverse incision into the joint, dividing it freely and thoroughly. I voided the joint of a large clot, that distended the cavity of the joint. The upper two-fifths was broken into four pieces and the lower three-fifths into seven pieces. You must know that where there are so many fragments of knee-cap very little can be done in the way of wiring, as you can not find bone big enough to drill through and make the wires hold. I adopted the plan of bringing the upper and lower fragments together with mattress sutures of chromicized catgut, putting in four sets of sutures, catching the fibrous tissue over the bone down to it, and bringing the upper and lower mass into close approximation. I put in a second layer of catgut, so as to approximate the soft tissues under the skin accurately and without much pressure. I put the leg in a plaster cast, leaving a small window in the knee area for the purpose of examination. First, however, I put on a collodion compress, for the protection of the fragments. At no time was there any subsequent discharge. The cast was removed about the fifth day after it was put on, or rather, the second cast was put on somewhere about the end of two weeks. It is still on. It is now seven weeks since the accident, and the parts are well supported. I believe that that plan of approximating pieces of bone of the patella affords a great deal in the way of getting a result which might otherwise leave us a white mass of cicatricial tissue between the fragments. I adopted this method because of a fracture that took place a few weeks before, and which was treated similarly, at the county hospital, by Dr. John White. He has a very excellent result, and the union thus far appears to be perfect. It is now two months since the accident.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, November, 1902.

The president, J. C. Spencer, in the chair.

POINTS IN THE MANAGEMENT OF CLEFT PALATE CASES.

Dr. H. M. Sherman read a paper with the above title.

Dr. E. Rixford: There is very little that I can say on this subject, Mr. President, in addition to or in criticism of Dr. Sherman's paper, but since you have called upon me, I will say that I have done this operation a number of times, have had a reasonable number of successes and a number of failures. Dr. Sherman's paper emphasizes the important fact that a partial success means a great deal for the patient, for it greatly facilitates subsequent operation, by which satisfactory union may be effected when the first operation seemed almost a failure. It is a question in my mind whether it is better to have the mucous surface turned up into the nose or to cover the defect by simple sliding of the flaps laterally, as an important element in producing destructive infection is the contact of the food with the raw surface. To make double flaps with mucous membrane above and below presupposes a rather narrow cleft, with abundance of tissue in the hard palate. One difficulty is to avoid leaving a small opening just behind the incisor teeth, due to leaving an anterior attachment of the flaps to provide for their nutrition. Another point the doctor made is the efficiency of caustics of one sort or another in continuing the irritation around the edges of an opening which may remain after the operation, or, rather, in destroying the epithelium, as it tends to run over the edge, by which cicatricial tissue is permitted to form, and will close defects of considerable size. I have used tri-chloracetic acid, strong ammonia, and cantharides, but have not used carbolic acid, but would think it must be very efficient. There are many difficulties on which Dr. Sherman might have laid more stress, difficulties that are very hard to overcome, in particular that of administering the anesthetic, for one is obliged to give a little chloroform and then work a little, and then give a little more chloroform, being careful at the same time not to get the patient profoundly under the anesthetic, for that paralyzes the reflexes and favors entrance of blood and vomitus into the lungs. I have done the operation with the patient in Rose's position, with the head hanging, and rather like it.

Dr. Sherman: The operation as suggested by Ferguson is, as far as it is concerned, ideal, and has a mucous membrane and no raw surface in both the nose and mouth, but there is no way of taking out the suture in the nasal side, consequently a material must be used that will slough out, and it is that sloughing that proves the undoing of all, because the new membrane is an unsurpassed culture place for pyogens. The use of an irritant to stimulate granulation is sometimes surprising. In one instance, where the father of the child was a dentist, the operation was a failure, but the father gave the carbolic acid treatment, and succeeded in getting a thin membrane closing off the nose from the mouth, and, although this was rather an insecure partition between the two, it did close in the gap. The person who administers the anesthetic should be a person accustomed to doing it, and one who is accustomed to working with the operator, each working when he can, and taking turns. The position with the head between the knees, supported by a towel, is an exceedingly comfortable one for the operator, one in which he can work for a long time without any special fatigue. I only mention certain points in this operation which have been neglected in ordinary books. I have found them to be of importance, and there is no place in English or American literature where they can be found.

A NOTE REGARDING SUPRACONDYLOID FRACTURES OF THE HUMERUS.

Dr. H. M. Sherman read a paper on "Supracondyloid Fractures of the Humerus." (Published at page 503.)

Dr. Rixford: I was extremely interested in the paper on the elbow, for it seems to offer an explanation of at least one element by which the so-called gun-stock deformity is produced. There is another element, however, which, so far as I know, has not received attention, and that is internal rotation of the lower fragment in these cases of supracondyloid fracture. From study of three cases which have come under my observation in the last two years, in which the displacement was so great as to require operation, it has seemed to me that this internal rotation is produced during convalescence by the position in which the child habitually holds the arm. If the elbow is flexed twenty or thirty degrees, or at a right angle, and the child tries to raise the arm by means of the deltoid muscle, the weight of the forearm tends to rotate the lower fragment inwards. I have repeatedly observed children with these fractures doing this very thing. The bone at the point of fracture is wide, but very thin, so that the relation of the fragments at the point of fracture is like that of two pieces of pasteboard placed edge to edge. If, now, this rotation take place, the bearing is lost, except at one point, and the arm is free to rotate about an antero-posterior axis, by which the carrying angle is lost and the gun-stock deformity is produced. That the rotation is one of the most marked features of the deformity after supracondyloid fracture is shown by the fact, which I have repeatedly observed, that the patient can put the arm which has had a supracondyloid fracture behind his back with greater facility than he can the sound arm, but he can not rotate it outwards as far as the latter. I have seen many more of these fractures of the lower end of the humerus treated in extension than in flexion, because of my association with Dr. Lane, who was very strong in his advocacy of the extended position in the treatment of these fractures. I do not remember seeing a single case of gun-stock deformity follow his treatment, but he made passive motion within a day or two after the fracture was put up. His idea in doing that was to prevent the filling up of the coronoid fossa with new tissue, but I suspect that it did more. It was undoubtedly a means of gradually adjusting the fragments into better position. He made but a single movement of flexion each day, and his results were excellent. (Dr. Rixford exhibited a number of radiographs from three cases of old supracondyloid fracture, which showed the internal rotation of the lower fragment, as well as the large deposit of new bone beneath the stripped-up periosteum in the neighborhood of the joint.)

Dr. J. H. Barbat: In many fractures, especially near joints, I find it advantageous to use more positive methods of fixation than can be obtained by the use of splints. It is practically impossible to reduce and keep in position many of the fractures which occur in the neighborhood of joints, and it therefore becomes necessary to use some method of fixation which will prevent deformity and loss of motion. In transverse fractures I find that steel staples give the best result; they prevent both rotation and angular deviation. In oblique fractures I prefer the ordinary wire nails, at least two being necessary to prevent motion. The sooner we realize that many fractures can not be adjusted without operation, the fewer will be the deformities following these injuries.

Dr. C. G. Kenyon: I presume every man succeeds best in his treatment in that which he has had most experience. Mine is extension. I have always treated cases of this kind in full extension, and I am not, as is well known, an advocate of passive motion. I put fractures of the elbow up in the extended position, and keep them fixed, neither using passive motion nor elementary motion. The biceps is a very strong muscle, and more deformities result in treating fractures in a flexed position than in an extended position.

Dr. Sherman: I quite agree with Dr. Barbat in local fixation, but do not like anything that in any way projects outside the skin. Rotation of the lower fragment of the upper arm is due to putting the arm up in a flexed position across the body. I think it was Hugh Owen Thomas who began treating fractures in the full-flexed position. If this flexed position is kept up until the joint stiffens, it is generally only temporary, and can be easily overcome. Dr. Cooper is perfectly right about the gun-stock deformity being no detriment to boxers. It is really of very little importance to any one except women who want to go with bare arms. The best paper on the subject is one by Cotton, that ran through several numbers of the "Annals of Surgery," in the early part of this year.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, November, 1902.

The president, Dr. D. W. Montgomery, in the chair.

TRIGEMINAL NEURALGIA.

Dr. H. M. Sherman reported a case of trigeminal neuralgia, Frazer's operation, and recovery. (To be published.)

Dr. Emmet Rixford reported the following cases:—

EXSECTION OF LARGE PART OF FEMUR, EXHIBITING PATIENT.

Dr. Rixford presented a case showing the result of removal of a large part of the upper end of the femur. This was originally a case of Pott's disease in the upper dorsal region, which has left a large gibbus. As a complication the patient developed tuberculosis of the right hip, followed by great destruction of the bone. He rapidly emaciated, and was a mere skeleton. Resection of the hip-joint was finally done, in order to save his life, and we were obliged to take away three inches of the shaft of the femur, as well as the whole upper extremity of the bone and a good part of the acetabulum and much of the ischium. We were afraid that he would die during the operation. During the convalescence he developed a nodule on the back of the hand, which was excised and found to be cutaneous tuberculosis. The operation was done some five years ago, and for several years he has been able to ride a bicycle and to ride horseback. The last few days he has been obliged to go back to his crutches, because of pain in the lower lumbar region. The leg is a surprisingly good leg, having excellent power of flexion. The boy can walk and put his whole weight on it. A sort of cap has formed over the upper end of the bone, which makes a pretty fair joint. He has about ninety degrees of active flexion and complete extension. The shoe he now wears is not high enough, for he has been growing since that one was made, and, of course, the other leg grows much faster.

Dr. H. M. Sherman: In excision of the hip one goes as far as the tubercular bone reaches and the life of the patient permits one to go. The support which the limb affords is due to the capsular ligament reaching from the ischium up to the shaft of the bone. In this case the support is very good; it is somewhat more than one would expect after so much removal. You can remove a good deal more of the shaft of the bone than has been done here, but the tissue left becomes flat; there is nothing to keep the periosteal tube from collapsing, so that, when new bone is produced, it is flat, and is subject to fracture. I have found that result in two cases in which I removed nearly the whole of the shaft. I think that the president has seen some of the operations on these children. The bone, though soft, is not necessarily tubercular, and eventually recovers in many cases, and becomes good bone, after the removal of the upper end of it, which is definitely diseased. If, however, nothing but the sheath can be left, amputation is better than excision.

BLOODY REPOSITION OF AN OLD DISLOCATION OF THE ELBOW IN AN ADULT.

There has been a good deal said about bloody reposition of old luxations in the last year or two, and this case exemplifies the result which may be obtained in this class of cases. This young lady, 20 years of age, in September, 1901, received a complete posterior luxation of both bones at the elbow. In the following March she came into the County Hospital, in my service, and with a pretty stiff arm. The elbow was held in a slightly-flexed position, with very little or no motion. There was the usual deformity of complete backward dislocation. I used Kocher's incision for resection of the elbow, which gave excellent access to the joint, but otherwise followed the technic of Bunge, who last year reported a number of cases in Langenbeck's Archiv. I opened the joint, cut off the olecranon with chisel, and with as little injury to the parts as possible, reduced the dislocation. I then wired the olecranon upon the ulna again. The wound healed by primary union, but, when the dressing was removed, I was not satisfied with the position of the olecranon, and had an X-ray photograph taken. By this radiograph you will see that there was a considerable interval between the ulna and the lower end of the humerus, and on that showing I was satisfied that I had not removed all of the new fibrous structure deposited within the joint. I therefore opened up the wound, took out the wire sutures, and practically did the operation over again. I found the olecranon fossa filled up with an extremely hard mass, which was white like cartilage, and which I had overlooked in my first operation. The coronoid fossa was also filled up. This thick mass was removed, and the bone was put into place. Primary union again took place, and the elbow was not very different from its normal appearance. The operations were done in March last, eight months ago, and I have not seen the patient since, until this evening; at my request, she came down from Stockton to-day. The joint is normal in outline, is painless, and its function is excellent. From a position of forty-five degrees flexion, it is voluntarily flexed to considerably beyond a right angle, a range of active motion of over sixty degrees. Considering that the operation was done six months after the injury, I would pronounce this a very gratifying result. The former method of treating such old dislocations was either to leave them alone with the deformity and loss of function, or to do resection, i. e., either fix the arm in right angles or remove the joint entire, leaving an unsightly deformity and a flail-like joint. However, the elbow after resection is very serviceable, and for a workingman is far better than a stiff elbow, but in a young lady the deformity is of serious consideration. Another point of considerable value is shown by this case, viz., the futility of efforts at reduction of such old dislocations. Reduction without the knife is simply impossible, and, even if we had been able to get the coronoid process into its proper position, the relations to the ulna and the humerus would not have been nearly as good as they are here, because of the deposit of new tissue in the joint. Furthermore, I have tried to reduce such old dislocations, and found, after opening the joint, although I used very great traction force, the coronoid process of the ulna jams into the articular surface of the humerus, and causes serious injury to the bone. To sum the matter up, I would say that, with so excellent a result of the open operation in this case, I feel sufficiently encouraged to think that the operation is not only justifiable, but that it bids fair to give better results than resection, the only other recourse in old luxation of the elbow.

SUPRACONDYLOID FRACTURE AT ELBOW.

Dr. Rixford presented a case showing final result after supracondyloid fracture at the elbow. He said, "At the last meeting of the County Medical Society, in the discussion on Dr. Sherman's paper, I showed some radiographs of fractured elbows, and among them radiographs from this patient." Since then I found the patient, and brought her here tonight to show the result of operation done two years ago. This was a supracondyloid fracture treated in extension. The case was brought to me nine weeks after the injury, in not very satisfactory condition; i. e., there was posterior displacement of the lower fragment and a large deposit of new bone under the periosteum, extending up pretty well to the middle of the humerus. There was practically no flexion possible, and very little rotation. The joint was swollen and tender. These facts were developed by radiographs. I made a posterior incision over the head of the radius, exposed the fracture, took away the new bone, and wired the fragments together. The wound healed by primary union, and this is the result after two years. Extension and flexion are perfect, and rotation is normal. There is, however, a loss of the carrying angle. In other words, there is present the gun-stock deformity to a considerable extent. It was in this case that my attention was called to the manner of production of the rotation inward of the lower fragment, which I mentioned at the last meeting of the County Society. It is of interest that this fracture was put up originally in the extended position. It evidently became a little loose, and the patient used to lift her arm, splints and all, from the shoulder, and I think that that lifting of the elbow with the weight of the arm has a good deal to do with the production of the rotation at the point of fracture. I have seen four or five other cases in which that same rotation was present, and which were put up in a slightly-flexed position; so it was not due to the placing of the forearm on the chest, as when the fracture is put up with the elbow at right angles. I have further seen the thing occur in bed. You will observe from the radiograph that, on account of the displacement and the large deposits of new bone about the joint, this elbow would have been perfectly useless without operation.

Dr. Sherman: The arm, consisting only of one bone surrounded by the cylindrical muscles, furnishes no grip for a splint, and rotation of the upper fragment within the splint easily occurs, i. e., the splint rotates around the humerus. Under these circumstances the arm will always come out with a gun-stock deformity. I have one now where it is pretty certain to be the outcome. So I have made up my mind that I shall not use the extended position for these cases any longer. In cutting down on these old cases, I have taken Kocher's incision, and sometimes the result is good and sometimes not. It certainly gives you very easy access to the joint when you are going to do an excision. But posterior incision would sometimes have been better, as in Dr. Rixford's fracture. In the second case presented by Dr. Rixford, I do not see why Dr. Rixford wired his olecranon, when sewing with chromic catgut would have given the same result.

Dr. Rixford: I will say that I tried to suture it with catgut, and could not. Too much force was required. It was a six-months-old luxation in an adult, and the triceps was very short, so that I had to use a great deal of force to get the olecranon into place. I used two wire sutures, and left them in situ. As for Kocher's incision, its particular advantage is that it does not destroy the nerve supply to the anconeus muscle. It gives very good access to the joint, without injuring the ligamentous structure very much. It is not necessary to uncover the head of the radius in this incision for posterior luxations, thereby avoiding cutting the orbicular ligament. Furthermore, the incision does not interfere with the triceps, and gives excellent opportunity of manipulating both the front and the back of the joint. I think that this general principle is of enormous importance, that, where there is any possibility of saving the joint, the greatest care should be used to do as little mechanical injury to it as possible. Kocher's incision has a great advantage over the long posterior incision in that regard. You need not use the lower part of Kocher's incision unless you wish to do something to the radius or cut off the olecranon. It is not so very different from the bayonet incision of Ollier. I would agree with Dr. Sherman as to the advisability of putting up such a fracture in the fully-flexed position, and I think in that way we can avoid the rotation better than in the extended position. I think, further, that rotation is largely due to the shape of the bone at the usual site of this fracture, where the bone is narrow and thin and the two edges come together. It is very easy for a flexion to occur, whereas, if there is a fracture where the bone is round, the fragments do not slide by each other. This ending has much to do with the production of the gun-stock deformity.

Dr. Barbat: I am very glad to have this brought up again. In dislocations and fractures around the elbow-joint, if they are not reduced in the beginning, in the first twenty-four or forty-eight hours, it is usually impossible to reduce them without cutting down on the fracture. If left to go over forty-eight hours, it is necessary absolutely to cut down to remove the large amount of material which has been thrown out for the repair of the bones. In a case which I reported before the Alameda County Medical Society, one of fracture of the internal epicondyle, the small fragment still attached to the flexor tendons had fallen in between the ulna and the humerus, and lodged in the sigmoid cavity. The fracture had been "set" and placed in a right-angled splint for two weeks before I saw the case. The X-ray showed that the fragment had produced a subluxation of the joint, making a large space between the sigmoid cavity and the trochlear surface of the humerus. I cut down, and had difficulty in removing the epicondyle, as it was thoroughly adherent to the sigmoid cavity. I removed it finally, and nailed it into place by two wire nails. In spite of this, a skiograph taken nine weeks after still showed that the sigmoid cavity was not in close contact with the trochlear surface of the humerus. I was sorry afterward that I did not do a little more work in scraping the newly-deposited tissue away, and certainly next time I expect to do it. In the case of Dr. Rixford, I would have been tempted to drive a wire nail into the olecranon to hold it in place, instead of using silver wire, which remains as a foreign body, and may give future trouble.

Dr. Sherman: I can not agree with what Dr. Barbat has said, nor can I quite agree with Dr. Rixford's idea that necessity occurred for going back and removing more of this new tissue in his case. The tissue is slowly absorbed, and we find that, after sufficient time has elapsed, there is a tremendous amount of motion compared with what we had expected. The history of most cases is that there is always disappointment when the splint is first removed, but a year or fifteen months later we find the motion has been regained. I should never think of going all through the operation simply to scrape out all the new tissue. Nature will take care of that later. I have now under my care two cases in which excellent results should be obtained, one a compound fracture, where I explored around the joint through the opening, to get my bearings, and to replace the fragments. I put up the fracture in extension. Drainage was made for a time. When the splints were removed, motion of the elbow was more than I had expected it to be, and it is already increasing. The other is a child who came with old epiphyseal separation; it was resected, put in proper position as nearly as possible, and put up in extension. This child has no active motion, only a little passive motion; but after the child is through with the splint life, and is permitted to use the arm, that motion is going to increase, and the hand will come very near to touching the acromion.

Dr. Rixford: I would differ from Dr. Barbat in his proposed use of a wire nail to fix the olecranon in such a case, for the reason that the force of the muscles will be exerted pretty nearly in the line of the nail, and will therefore tend to pull the nail out. I used two silver-wire sutures, and I got very nice approximation, but I had to use great force to get the bones into contact, and I think that the nail would not do the work as well. As to Dr. Sherman's point about the absorption of the adventitious tissue in the joint, I am not prepared to dispute his verdict, but will say that this case was an adult, and there is a tremendous difference in the surgical work about the joints in adults and in children. Had this been a child, I would not have reopened to get out the new tissue, but would have expected it to be absorbed. Bunge's article on this subject, published in Langenbeck's Archiv about two and a half years ago, contained the history of some thirteen or fourteen cases of bloody reposition. The results were not very satisfactory in the adult, but were eminently satisfactory in the child. Therefore my greater interest in this case. The second operation was done a month after the first.

BUBONIC PLAGUE.

Dr. E. L. Wemple reported a case of bubonic plague. (No. 89, published at page 509.)

Dr. Montgomery: It is very important for us to recognize the symptoms of plague. It is a disease which will occur in every hospital in this city before long. It has now occurred in five hospitals.

Dr. Rixford: Did the patient vomit before the operation? and did the bowels move?

Dr. Wemple: The patient was nauseated, and had vomited several times before the operation. He had the symptoms of a peculiarly strangulated hernia, but, the bowels having moved, I saw no intestine in the sac. There was a little furrow between the tumors corresponding to Poupart's ligament. It was extremely sensitive to touch. I operated because it was the only thing I could do to relieve him of the pain. The question of bubonic plague was the last one that would enter my mind. It seems to me that I am the only man here who dares say anything on this subject. I have seen one case only, and have followed it up to the end, and must admit I was unprepared for it, and thought it my duty to look up the subject. It is the duty of every physician to look up an infectious disease like this, to look up the subject of this bubonic plague, of which we now know so little.

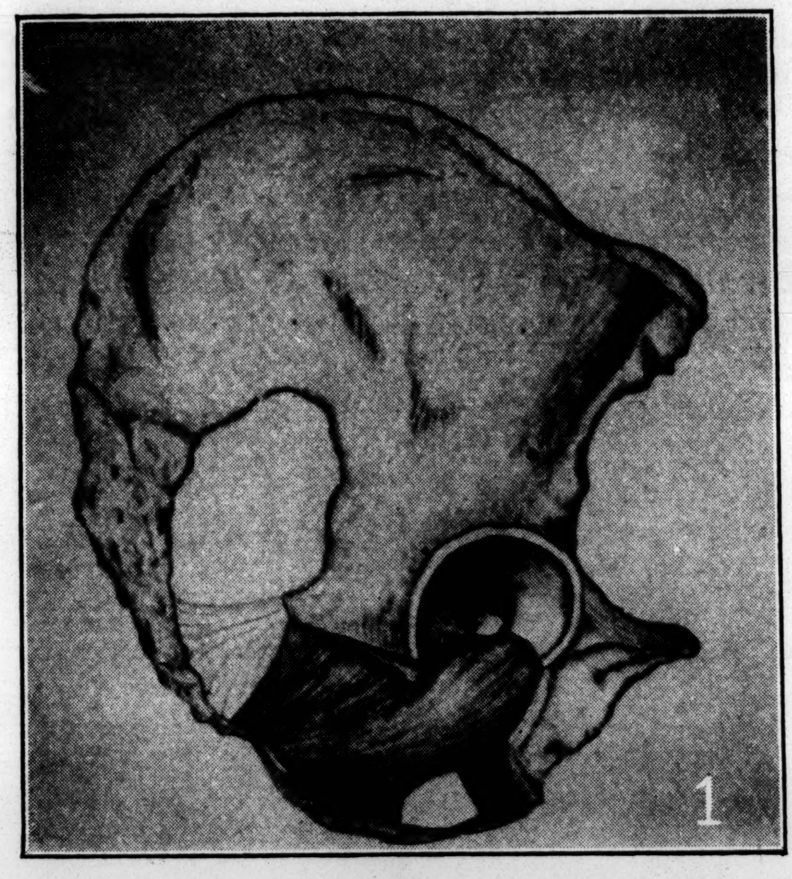
Dr. G. Gross: Dr. Wemple need not feel chagrined that he did not recognize the disease. In looking up the subject, I read the other day that Dr. Muller, who had been in India, and had watched the disease for years, was three times called to see a case of plague, but did not recognize it. It was a pulmonic form.

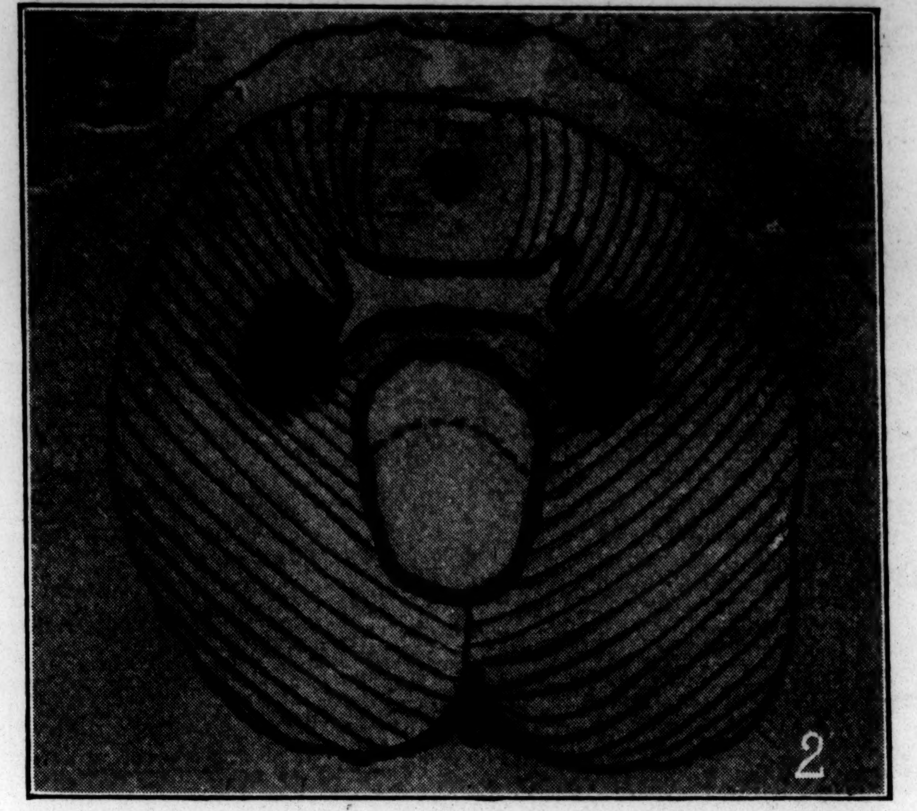
Dr. Barbat: I had the pleasure of seeing this case about half an hour before the operation. I looked him over casually, and ran my hand over the enlargement in the groin. A remarkable thing was the exquisite tenderness of the enlargement. I made a diagnosis of possible femoral hernia with infection of the contents of the sac, basing my diagnosis on a case operated on a short time time before, in which the sac contained a perforated appendix. The history was certainly very misleading, the sudden onset of the attack, which followed immediately after straining at stool, and the rapid appearance of the lump shortly after. The reason for the infection was not clear, and could only be accounted for, assuming the case to be one of hernia, by the assumption that the contents of the sac were a perforated appendix or a necrotic omentum, because we were positive that there was no intestine involved. One feature which weighed against the diagnosis of hernia was the fact that there were two lumps, one above and one below

Poupart's ligament, and, while the history pointed towards hernia, the double swelling would shut out that diagnosis. Taking everything into consideration, I do not know of any other surgical disease which resembles this case, and I do not think that I would again be misled in a case of bubonic plague.

Dr. Wemple (discussing his paper): I did not make a diagnosis. I did not suspect plague until I cut into it.

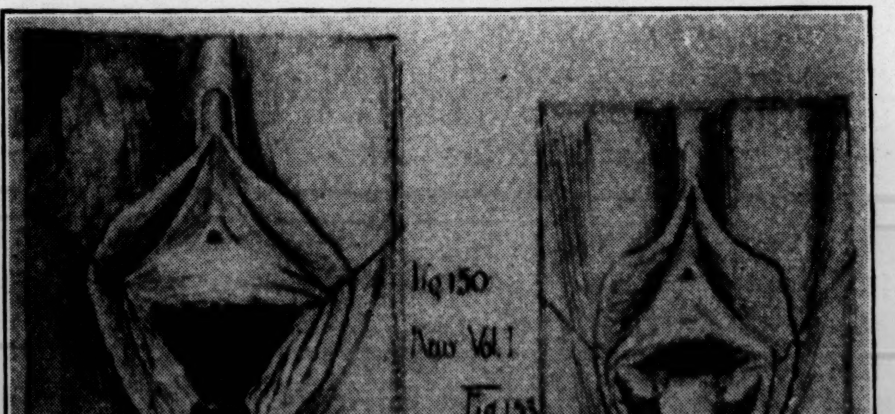
DENUDATION AND SUTURE IN REPAIR OF THE PERINEUM.


1


2

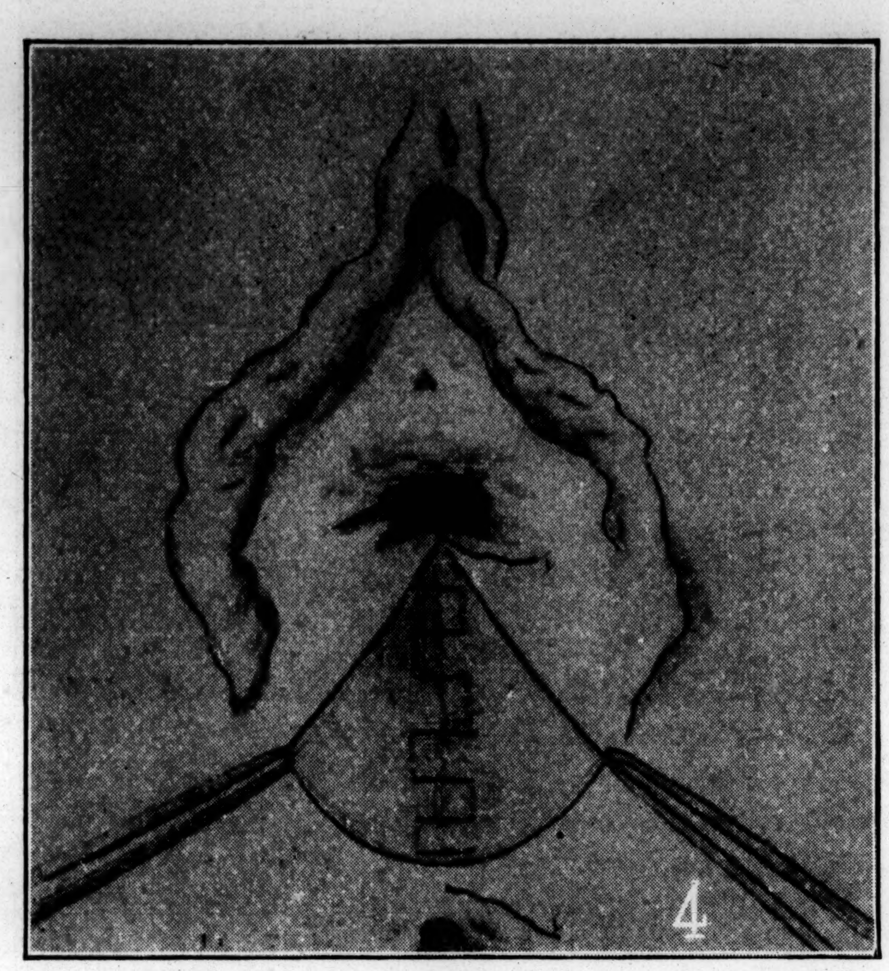
Dr. G. B. Somers presented a number of diagrams in reference to the operation for repair of the perineum. In explanation of the charts, he spoke as follows: The subject of the repair of the perineum is always interesting and always new. I believe there are already between twenty-five and thirty different operations on record for repair of the perineum, and the end of new inventions has not yet been reached. If this great number of operations means anything, it means that operators have not been satisfied with the classic methods. As the classic methods, I suppose, we may consider Tait's, Hegar's, and Emmet's operations. Tait's is an operation that is performed where there is not a large redundancy of tissue, and where at the same time it is desired to carry out a rapid operation. It is the easiest of the three to perform. The principle upon which it is based is, to my mind, better than that underlying the Emmet, and it is really the same as that underlying the Hegar. It is to lift up the vaginal mucosa, depress the rectal mucosa, and unite the retracted levator ani and perineal muscles between these two layers. In the Hegar operation the vaginal flap, instead of being retained, is dissected off. Among American gynecologists the Emmet operation seems to be the favorite, more particularly where a rectocele is present. Reed, Dudley, of Chicago; Kelly, Penrose, Byford, Burrage, of Boston, and many others, prefer Emmet's operation where a rectocele is involved. In my own experience I have had unsatisfactory results from all three of the classic methods, and have never been satisfied with the principles of the Emmet. It seemed to me that neither the denudation or the method of suturing was entirely satisfactory. In order to explain my objections to the Emmet operations, I have had this series of charts prepared, and with them wish to offer a preliminary report on a modified method of performing perineorraphy.

The first chart represents the anatomy of the pelvic floor. The levator ani is shown from a side view, showing its relations to the anus and vagina. Between the vagina in front, the anus behind, and the levator ani above, is a space that is occupied by the so-called perineal body. My object in calling your attention to this plate is to emphasize the fact that a sharp distinction must be drawn between the levator ani, which forms the pelvic floor, and the perineal body, which is superficial to the floor. In other words, we may have a rupture to the perineum without injury to the pelvic floor, and though the vaginal outlet may appear considerably enlarged, a careful examination will show that those fibers of the levator ani which pass between the rectum and vagina are uninjured. These fibers support the rectum, and consequently we are not likely to have a rectocele following an injury which does not weaken the pelvic floor.



3

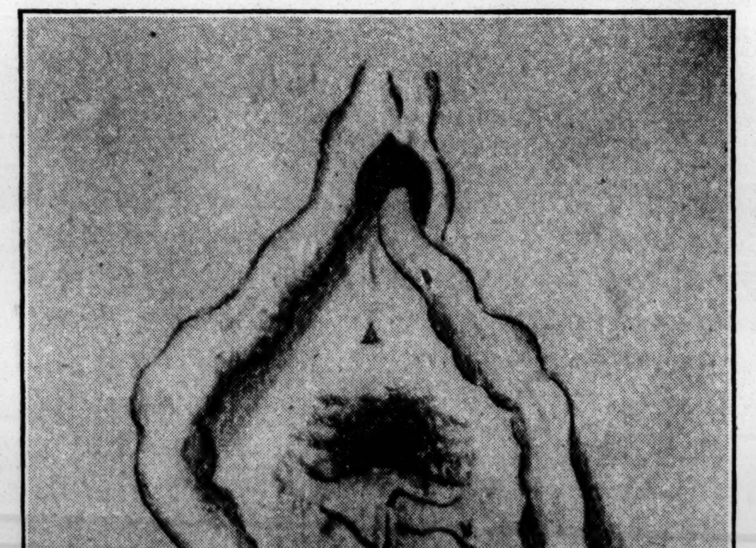
If we examine the pelvic floor, we find that between the vagina and the rectum there is a considerable band of tissue derived from the levator ani. The folds of the vagina are so arranged as to make a sulcus on either side. When a laceration takes place, it usually occurs in the right or left sulcus rather than in the median line. Now what is the condition when any portion of these levator ani fibers are injured? Suppose, for instance, that the tear occurs in the right sulcus. The fibers to the right retract to the right side of the vagina. Those that run across between the vagina and rectum, having lost their point of insertion, are no longer able to prevent the rectum from encroaching upon the vagina. As the rectum bulges forward in forming a rectocele, the band of muscle fibers which formerly gave thickness and strength to the recto-vaginal septum, become stretched and attenuated, so that the septum becomes comparatively thin. For all practical purposes, then, we may consider that these fibers have retracted clear across the septum to the opposite side of the vagina, assuming a position to the left of the vagina. If we admit that these fibers thus retract, leaving only a thin septum, it means something very important in reference to Emmet's operation. It means that the tongue of tissue which was left between the two denuded sulci does not contain the missing link of levator fibers to be joined to those on either side. The operation simply links the two sides by a strip or tongue of tissue, which is manifestly weak. Is it not better to bring the retracted fibers directly together in the median line rather than unite them in two places by means of this intervening thin septum?


4

With the Hegar denudation the incision is triangular, and the apex is placed high enough on the vaginal walls to make sure that the levator fibers are exposed. Instead of pulling down the most prominent portion of the rectocele, this is pushed back, and the retracted fibers are brought together over it so as to keep it there. Granting that the Hegar denudation, if not the best, is at least a reasonable one, what is the best way of uniting it? The majority of operators use the interrupted suture. The objections to the interrupted suture are: (1) We must use a large number of them in order to bring the parts together. (2) Even when deeply inserted, they must produce more or less puckering of the tissues, and so leave dead spaces. (3) All sutures that are tied interfere more or less with the circulation. (4) Where sutures are tied, if there be any swelling, they cut into the tissues. The continuous suture seems to be free from these objections. Martin uses the Hegar denudation and a continuous suture of catgut, whipstitching back and forth until the surfaces are brought in contact. This is an ideal method, but practically a large amount of catgut left in the tissues is a risk, because the perineal region is hard to keep clean. It struck me that it would be very desirable to use sutures that could be inserted as continuous sutures, yet at the same time be easily removed. I have accordingly hit upon the following method. Starting at the upper angle of the denudation, a silkworm gut suture is inserted with a mattress stitch, coming out at the lower angle. The first is drawn taut, and then two or three more are inserted, one above the other, as shown in the figure.

The most important point in the method is that the ends of the sutures are left long and clamped with shot about one inch away from the surface. No knot is tied. Both the vaginal and the perineal ends are clamped in the same way. The sutures keep the surfaces together, without becoming loose, and yet, if any swelling occurs, it simply takes up the slack, the tissues sliding along the free ends towards the shot.

At the end of ten days the shot on the vaginal end of the sutures are cut off close to the surface, and the perineal ends are then grasped and pulled out. The advantages of this method are: (1) The small number of sutures used. (2) The tissues are brought together without tension and without puckering. (3) The continuous suture does not interfere with the circulation. (4) If swelling occurs, the tissues slide along the free portion of the sutures. (5) The sutures are easily removed.


5